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ABSTRACT

The economic state of higher education and the social and political forces that threaten it are examined. College attendance and employment patterns since the 1960's and projected trends for the 1980's are considered. Projections of a shift in employment patterns and a deteriorated market for college graduates are thought to indicate the need for new educational policies. Reasons for current dissatisfaction with the level of support for higher education, from the point of view of institutions, faculties, and students, and prospects for each group if the current level of support continues are discussed. It is suggested that the changing demographic conditions that affect enrollments are likely to force some institutions to close their doors, and to produce a major downturn in the fortunes of faculty members. The following approaches to student financing are considered: the laissez faire economists' approach, the Swedish model, and the eclectic model. Policy with respect to work-and-study opportunities, the lack of suitable jobs for Ph.D's, and the potential of research universities to conduct research is considered. Responses by Joseph N. Crowley and Michael D. Usdan are included. (SW)

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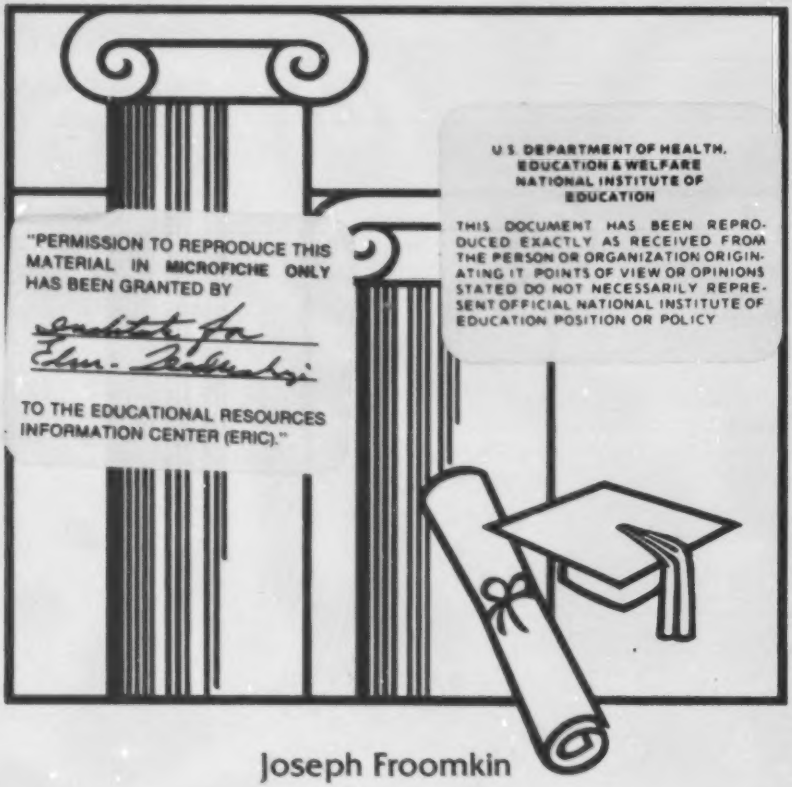

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Joseph Froomkin

INSTITUTE FOR EDUCATIONAL LEADERSHIP

POLICY 6 PAPER

THE GEORGE WASHINGTON UNIVERSITY

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The Institute for Educational Leadership (IEL) seeks to strengthen present and potential leadership in American education at the policy level of state and federal government. Established in 1971, IEL is a policy planning and coordinating agency for a number of related educational programs, including Education Policy Fellowship Program (EPFP), Educational Staff Seminar (ESS), The Associates Program (TAP), a radio series over National Public Radio titled, "Options in Education," Family Impact Seminar (FIS), Washington Policy Seminar (WPS), Ford Fellows in Educational Journalism (FFEJ), and Education of the Handicapped Policy Project (EHPP).

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Established in 1969, ESS is funded by the Institute and by partial reimbursement from the government agencies served. In fiscal year 1977 ESS conducted 60 programs for over 1800 federal employees.

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Telephone: 676-5935
The Associates Program (TAP) is an evolving IEL activity. Its emphasis up to now has been to provide seminars for legislators and other policymakers at state capitals. Begun in 1972 with three state educational seminars TAP now sponsors 32 seminars, all directed by Associates who, on a part-time basis, arrange 5 to 10 programs annually.

TAP maintains a network of state-level "generalists" (Associates) whose ties to IEL in the nation's capital provide rare linkages among federal and state education policysetters. TAP encourages similar linkages among agencies and coalitions seeking to improve processes in state-level decisionmaking. It also sponsors national and regional conferences dealing with state-level responsibilities in education.

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Telephone: 785-6462
IEL and National Public Radio co-produce the "Options in Education" series heard weekly over most of NPR's 201 member stations from coast to coast. Voice of America rebroadcasts the one-hour programs, and IEL makes cassettes and transcripts available at minimum costs. "Options" has received awards from the Association of State Education Department Information Officers (1978), The Education Writers Association (1974, '75 and '76) and from the Council for Advancement and Support of Education (1974). Funds for "Options in Education" are provided by IEL, National Institute of Education, Carnegie Corporation, the Corporation for Public Broadcasting and other grantors.

Washington Policy Seminar (WPS)
Telephone: 676-5940
The Washington Policy Seminar (WPS) brings select groups of educators and policymakers to the Capital for three to five days of intensive exposure to the people, processes, and institutions which shape federal education policy. Speakers for the Seminar include Members of Congress, Congressional staff, senior officials of the Executive Branch, leaders of educational lobbies and associations, journalists and seasoned "Washington watchers." Funding for the Seminar is provided by IEL general support funds and reimbursement by sponsoring organizations.

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The Family Impact Seminar seeks to identify and assess the effect on families and children of a variety of public policies. The Seminar and its several task forces are composed of scholars and policymakers. Together, they examine and test the feasibility of developing "family impact statements" on selected government policies and programs. The specific issues to be examined are selected from a broad range of existing or proposed public policies. The policies may include some in such areas as education, health or welfare, which are specifically designed to help families and children. Other areas such as taxation, which are focused primarily on other objectives, but nevertheless affect families and children, also are examined. Funding for the Seminar is provided by the Foundation for Child Development, the Lilly Endowment, Robert Sterling Clark, Mary Reynolds Babcock, Edna McConnell Clark Foundations and the Lydia DuPont Fund.

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NEEDED: A NEW FEDERAL POLICY FOR HIGHER EDUCATION

Joseph Froomkin

With Responses by Joseph N. Crowley and Michael D. Usdan

INSTITUTE FOR EDUCATIONAL LEADERSHIP

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Foreword

Federal policy toward higher education operates at several levels and for diverse purposes. The stakes are high and the issues complex. Virtually every important sector or agency in Washington has a substantial investment in the yield of American postsecondary education—whether of competent professionals, productive research, or of the intellectual undergriding of the larger society.

Yet, the approach of the nation's leaders shows little consistency, even at a time when the health and survival of much of American higher education are less predictable than in any period since World War II. The forms and directions of the federal role are especially significant as we approach the renewal in 1980 of the main national legislation affecting our colleges and universities and their students: the Higher Education Act of 1965.

To help set the stage for the spirited discussion that should precede legislative action, the Institute for Educational Leadership is pleased to publish Joseph Froomkin's hard-hitting dissection of the state of higher education in 1978. Drawing heavily upon carefully assembled fiscal, economic, and demographic data, Dr. Froomkin takes a thorough look at the economic state of higher education and at the social and political forces that threaten it. Unlike countless other observers, he is unafraid to translate his analysis into a set of specific policy alternatives for consideration by policymakers.

To round out Dr. Froomkin's report, the Institute for Educational Leadership is including in this report reactions from two of the nation's most discerning analysts of higher education: Dr. Joseph N. Crowley, President of the University of Nevada (Reno), and Dr. Michael D. Usdan, Commissioner of the Board of Higher Education of the State of Connecticut. Both share

many of Dr. Froomkin's concerns, but neither fully accepts either his use of data or recommendations for rethinking federal policy. We hope that the resultant three-way combination of fact and informed commentary will help spark the vitally necessary debate on higher educational policy that must occur in the next two years.

Needed: A New Federal Policy for Higher Education is *Policy Paper Six* in the Institute for Educational Leadership's continuing policy-oriented analyses of educational issues. Information on obtaining *Policy Papers* and other publications of the Institute is available on the inside back cover.

Samuel Halperin

Director
Institute for Educational Leadership
October 1978

Acknowledgments

Early in 1977 this writer was asked to set down his impressions of the changes in federal policy which will be needed in the period 1980 to 1985. The resulting essay was supposed to be controversial and innovative, and written in a relatively untechnical manner in order to be accessible to a wide audience.

This monograph owes much to my collaborators in the Educational Policy Research Center, most notably Mr. J. R. Endriss and Dr. David Selby. I would also like to thank Dr. Philip Austin, now at the Bernard Baruch School of the City University of New York, Dr. David W. Breneman of The Brookings Institution, and Dr. A. J. Jaffe of Columbia University for reading and commenting on an earlier draft of the manuscript.

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About The Author

Joseph Froomkin is Director of the Educational Policy Research Center for Higher Education in Washington, D.C. He served as Assistant Commissioner for Program Planning and Evaluation, U.S. Office of Education from 1966 to 1968.

Dr. Froomkin has published numerous articles and books dealing with education, technology, and the labor force. His most recent publications are: "Occupational Opportunities for College-Educated Workers, 1950-75," *Monthly Labor Review*, June 1978, and "Middle-Income Students and the Cost of Education," ACE *Educational Record*, Summer 1978.

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I

New Policies For Higher Education?

The policy issues which come up in most discussions of higher education have scarcely changed in the past 15 years. They include such concerns as how to give the children of poor parents access to higher education, and how to retain them in it; different ways of ensuring that students attend institutions of their choice (a euphemism for channeling public funds to the private sector); the desirability of encouraging innovation in curriculum and in learning environments; and the necessity to improve the planning, cost control and accountability of institutions. Only the pursuit of excellence is mentioned less often; this amorphous concept was used to justify higher levels of expenditure per student. It has now been replaced by concern for the survival of the smaller and less popular institutions.

Perhaps it should not come as a surprise that these issues have remained so constant. Most policy pronouncements about higher education are based on value judgments about the benefits of extending education beyond high school, and value judgments do not change rapidly. Nor have there been any startling new research findings to challenge them. After spending much time analyzing data that were collected a number of years back, researchers have mostly failed to predict the effects that changes in our society have on the higher education sector. Thus, public policy is formulated to respond to the concerns of the past two decades, legislative action is still directed to areas spotlighted by pressure groups, and new subsidies are justified with outdated arguments.

Analysts who wish to formulate policies for higher education to fit tomorrow's conditions are not well served by the current research. No one has

spelled out the forces which will fashion the college and university scene a decade from now, or the new policies which will have to be introduced as a result of the anticipated changes. Yet such information is desperately needed, for it is universally agreed that the environment in which the post-secondary sector will be operating is likely to change radically in the next ten years. Enrollments will decline, the job prospects for college graduates will continue to deteriorate, and it is quite likely that taxpayers will be increasingly reluctant to assign a growing share of their income to the public sector, thus exacerbating the financial problems of higher education institutions.

Since it takes a long time to establish a consensus, it is urgent to ask ourselves now which programs should be curbed, and what new programs should be initiated. A convincing case can be made for some entirely new patterns of subsidies to higher education. Yet the special interests will vigorously defend their subsidies, and as long as decisions about subventions are made on an *ad hoc* basis, these special interests are likely to win.

In shaping policies for an uncertain future, guts may be as important as brains. Important trends in postsecondary education are generally identified only a goodly number of years after they have manifested themselves; year-to-year changes in such factors as enrollments often provide misleading signals. In the fall of 1975 enrollments increased substantially, and a number of analysts concluded that a new enthusiasm for higher education had gripped the young. In the fall of 1976, though, enrollments stayed at the previous year's level, and the optimistic analysts had to climb down from their limb as graciously as they could.

Periods of unwarranted enthusiasm and depression will continue as long as our models are not comprehensive enough and our statistical techniques are not sophisticated enough to be good predictors of the future. Hence, a great deal of subjective judgment underlies every prediction. This fact makes it easier to ignore unwelcome forecasts. A forecast of declining college enrollments and declining wages for teachers that is used to advocate a drastic restructuring of higher education is not likely to be greeted with hosannas. Like the messenger who brought the bad news, the analyst who prepares such forecasts could well be executed or, at the least, deprived of his research grant.

Despite such dangers, it would be a mistake to shirk the responsibility of drawing conclusions from the decline in the birth rates, the change in college students' choices of majors, and the present and future shortages of prestigious jobs for college graduates. We believe that the consequences of the changing patterns of education are significant, but difficult to identify, because we have been living in a period which, we hope, is atypical, charac-

terized by high unemployment, slow growth in productivity, and deteriorating terms of trade.

College Attendance and Employment: The Past Decade

The rapid growth of enrollments in higher education in the U.S., which amounted to 45 per cent in the second half of the 1960's and was followed by a smaller, but still impressive increase of 30 per cent in the first half of this decade, has obscured the much more significant fact that the majority of young Americans did not plan to spend four years in college.

Starting in the 1950's, the average number of years of school completed by 25-to-29-year-old Americans has grown much more slowly. Had the previous decades' rate of growth continued, the median attainment of the current group would have been some 3.3 years higher—close to the number of years required to graduate from college.

Until now, the number of years of school completed by Americans has grown strikingly from generation to generation. The median attainment of 25-to-29-year-olds in 1960, for example, was some three years higher than that of their parents (persons 25 to 30 years older). But in 1975, the difference between these two age groups narrowed to 0.6 years of education. Instead of continuing to the level of college seniors, the median education of young Americans got stuck at less than one full year of postsecondary attendance.

This slowing down of the median educational attainment of younger Americans is a sign that the United States is reaching a saturation point in the demand for education. While high school graduation is now established as a minimum norm for the majority, and some exposure to the postsecondary sector is also increasingly common, the plans of the high school class of 1972 have indicated that no more than 50 per cent of high school seniors expect to earn a bachelor's degree.

The number of people with a short exposure to education beyond high school is underestimated by educational planners who rely on the statistics collected by the U.S. Bureau of the Census. The Census statistics fail to make clear that although some 60 to 70 per cent of all high school graduates are likely to enroll in a postsecondary course sometime during their lifetime, about a fifth of them are not likely to earn a year's credit. The Census publishes separate figures for the number of high school graduates and for persons who have completed one or more years of postsecondary education, but for some reason it lumps students who have had less than a full year of higher education together with the high school graduates. In other words, only that half of each high school graduating class which spends more than a

year in some postsecondary educational program is reported by Census as having attended college.

By an odd coincidence, the proportion of high school seniors who enroll in college in the fall following their graduation is also fifty per cent of the high school class. It is often assumed, carelessly, that the college freshmen who enroll soon after graduation are the very same people who are later reported to have completed one year of college or more. Actually this is not the case; if one looks carefully, one finds that attendance patterns in postsecondary education are far more complex.

The children of well-to-do parents usually enroll in college immediately after graduation from high school. The children of poorer parents are more likely to delay their enrollment by a few years, until they have become independent or have saved money to pay for additional instruction. This differential pattern of enrollments has confused our perception of the proportion of eligibles in each income group who attend postsecondary institutions.

As long as most of the statistics about the income level of parents are collected in cross-sectional surveys (with some surveys limited to full-time students), we collect income data about the families of younger students who are still dependent on their parents, but lose track of the social and economic origins of the bulk of delayed entrants who live away from home. Thus, the most widely used statistics about the incomes of parents of students underestimate the number of students from poor families who participate in higher education. This shortfall is probably on the order of some 15 to 20 per cent, and the "access figures" of children whose parents are in the lower quartile should probably be increased accordingly.

Even with this adjustment, however, there is little doubt that the children of rich parents are more likely to enroll in postsecondary institutions. Repeated surveys of high school seniors' intentions to enroll in college are unanimous in showing that seniors whose parents are in the highest income quartile are more likely to plan to continue their education than those who were raised in less affluent households. This gap has narrowed since 1959, when the children of parents in the top quartile were nearly thrice as likely to state that they might or would attend college as children of parents in the lowest income quartile. Today, the difference is more on the order of 15 to 20 per cent, and is a tribute to the effectiveness of the student aid program, as well as the various efforts to recruit students from disadvantaged backgrounds. Thus, in the 16 years from 1959 to 1975, the income distribution of high school seniors who intend to go to college has changed significantly. Families in the upper half of the income distribution used to account for

two-thirds of this number; they now account for 55 per cent. And while children from the lowest fourth of the income distribution accounted for only 11 per cent of the high school seniors who intended to go to college in 1959, they now constitute 19 per cent of the total.

Richer students are more likely to enroll early in college, and those who enroll at younger ages usually attend full-time. Furthermore the children of the rich are generally better prepared for college than the children of the poor. For those reasons the composition of the total undergraduate body, which encompasses all four years of college, is much more heavily skewed towards the well-to-do than that of the freshman class. Perhaps as much as three-quarters of the BA recipients are likely to come from families in the upper half of the income distribution.

The high attrition rate of the children of the poor has no doubt been lowered in the past ten years, thanks to the availability of increased student support (the graduation rate for 25-to-29-year-olds who persisted in higher education for a year jumped by at least 10 per cent from the 1940's to the 1970's, and may be still higher today). Nevertheless, the average student from a poor family clearly has much lower chances of graduating than the scion of the rich. One cannot avoid the conclusion that higher education is still highly skewed to delivering benefits to students whose parents have above-average incomes. It is unfortunate that the market for people with a college education soured before the social problems of equality of opportunity could be solved.

Lately, an increasing proportion of college-trained people have been filling jobs formerly deemed inappropriate for them. Between 1960 and 1970, the proportion of the labor force that had a college education increased from 10 to 13 per cent, yet there was no indication of an imbalance between the supply of college-trained workers and the number of suitable jobs. The vast majority of persons with college degrees were placed in professional or other high-paying administrative, managerial and sales positions. Between 1970 and 1975, however, the imbalance between workers and suitable jobs became more apparent. By then, nearly 17 per cent of all employed workers were college graduates, and an increasing proportion of these were found in occupations with less status. The wages of younger college graduates reflected this change; furthermore, they increased less than the wages of other younger workers between 1970 and 1975. The earnings of college graduates aged 25–34 increased by 19 per cent during that period, as contrasted to the 32 per cent rise in wages for high school graduates in the same age group.

The earnings of college graduates probably would have been even lower had these graduates not skimmed some of the more desirable jobs which

were formerly filled by persons with a partial college education, though not a bachelor's degree. The proportion of professionals with a partial college education declined from one in five in both 1960 and 1970 to one in six by 1975. These developments are particularly significant since persons with some college education did not profit as much financially from the boom of the 1960's: their wages increased more slowly during that decade than those of either high school graduates or college graduates. There is considerable evidence that an increasing proportion of persons who do not complete college are now finding jobs in blue-collar occupations as well as in lower-level white-collar occupations.

Additional evidence that the market for the college-educated has changed radically in the past few years can be adduced from their unemployment rates. Some 6.4 per cent of college graduates were unemployed in 1975, compared to 2.4 per cent in 1970. Persons who had put in fewer than four years of college saw their unemployment rate climb from 3.9 to 6.9 per cent, close to the rate at which unemployment increased in the total population.

The changing pattern of job openings has not been lost on potential enrollees in higher education. An increasing proportion have switched from degree-credit courses to the non-credit offerings of the postsecondary system. These non-credit offerings, mostly of short duration, generally prepare young persons for specific lower-level technical and blue-collar jobs. Apparently many recent high school graduates have read the job market right, and are acting accordingly.

Among students in the degree-credit programs, there is a pronounced shift to "practical" majors, such as business, and away from majors which prepare students for occupations which are experiencing a glut, such as teaching. Since these changes have occurred recently, one can make a good case that the conditions in the labor market in a given year are more powerful persuaders than long-range anticipations of the earning potential in a given profession.

The Next Ten Years

It can be conservatively estimated that by 1985, if past trends of enrollment continue, some 22 per cent of all employed persons will have had four or more years of postsecondary education. An equal number will have continued their studies at least one year beyond high school. This means that the proportion of persons in the labor force who have had some college education will have more than doubled in 15 years—a change which is likely to result in important shifts in the distribution of the better-educated workers.

The magnitude of these shifts will depend largely on the public policies adopted by the government. Public authorities have played a crucial role in the employment of the well-educated in the past. It may come as a surprise to some that in the decades of the 1950's and the 1960's, 60 per cent of the new jobs for college graduates were provided by the public sector or the "merit good" sector (the provision of education, health and social services). Since then, the proportion has increased; we estimate that the public sector employed roughly 70 per cent of the college graduates who entered the labor force in 1970 to 1975.

Should the public sector continue to grow at its previous rate, the new and more educated workers could conceivably go on filling the kinds of jobs to which previous generations of the well-educated were accustomed. However, there are indications that this expansion cannot continue. In the first place, the demand for teachers, which played an important role in the employment of college graduates, is likely to stabliize as a result of declining birth rates. In the second place, the public's continued resistance to higher tax rates is likely to curb the growth of government services.

Our best estimates of the job prospects of college graduates indicate that in 1985, one out of three workers who are college graduates will probably fill a job which was filled by a non-graduate in 1970. Even if the 1975 job patterns remain unchanged, a less dramatic, but nevertheless important shift in the quality of jobs is indicated: One out of four college graduates will then be in a position formerly filled by someone with less than a college degree.

As college graduates edge them out of many jobs, persons with less than four year of college will face an uncertain future. In many cases, their promotion patterns may be blocked by the plethora of college graduates. At the same time, those who are just entering the labor force may have to accept jobs with less status at the outset of their careers.

The most likely projections of the employment of college graduates between 1975 and 1985 indicated that their share of employment will increase from 10 to 15 per cent in the profit sector, and from 36 to 42 per cent in the public and merit good sector. The private sector is likely to supply some 60 per cent of the total jobs filled by new entrants with this level education. Thus, a complete turn-around in the employment patterns of college graduates is anticipated.

This shift in employment patterns is likely to be less pronounced for persons who have not finished college. While they are likely to find jobs in the private sector in the same proportion as college graduates, a higher proportion of them were already employed in the profit sector in previous decades. Therefore, the proportion of this group of workers in the profit

sector is expected to increase more moderately from roughly two-thirds to three-quarters between 1975 and 1985.

Only a technological revolution, or a shift in the patterns of consumption of goods to government services, would require an increase of such magnitude in the number of college-trained workers. On the contrary, it will become more and more common to question the amounts of public funds that are allocated to education, since it will be argued that this expenditure contributes little to economic growth.

The defenders of education's place in government priorities find it very embarrassing that the current state of economic theory gives scant support to their value jugments. As Mark Blaug has pointed out, research in human capital theory, or returns to education, has eschewed testing either the effect of the "social" rate of return upon the allocation of resources, or the role of government subsidies in equalizing the social yield at all levels of education, or the effect of education on the mobility of different social groups.

Human capital theory has been the chief refuge of economists who wish to limit subsidies to higher education. However, it is not particularly useful as an indicator of the level of educated manpower needed for a given stage of economic development. Most economists now use the higher lifetime earnings of educated people as a justification for investment in education. Rates of return to the individual and society are calculated by dividing the present value of the incremental earnings of typical persons with different levels of education by the expenses which were incurred in obtaining the additional levels. Most findings to date have implied that, except for graduate education, the rates of return in education are roughly equal to those obtained by investing in physical capital. Hence it is argued that the level of investment in undergraduate education in the past was about right.

Recently there has been some evidence that this rate of return is likely to decline in the future, and some are concerned that Americans are becoming overeducated. If the difference between the earnings of college graduates and high school graduates does narrow, one of the underpinnings of the economic justification of education will be weakened.

An increasing number of writers argue that the rate of return for education is irrelevant anyway, since education is used as a screening device to exclude persons without credentials from desirable jobs. Other writers, less cynical about the uses of education, maintain that employers use education as a signalling device to alert them about job applicants' trainability and social acceptability. The difference between the views of human investment theorists and those of their critics will not be resolved until we understand the effect of education on the requirements for the multitude of jobs in our

society. Such understanding is not likely to dawn upon us soon enough to contribute to the timely restructuring of policy for higher education.

Some of the older justifications for higher education have also fallen out of favor—for example, Denison's theory that a substantial part of the increase in the productivity of society as a whole can be ascribed to education. This does not survive an empirical comparison of the experiences of different countries; Consequently, alternatives theories, which do not assume that the marginal productivity of capital is constant over time, have been advanced to explain the growth in the productivity of the labor force.

In their latest attempts to justify higher levels of postsecondary education, economists have invaded territory which is generally staked out by sociologists. Thus the tendency of better-educated people to accept innovation earlier than those with less education has been cited as an additional advantage of higher education, and ingenious attempts have been made to quantify it. It is also becoming fashionable to try to estimate the extent to which the better-educated benefit from the greater use of resources, such as a higher consumption of health services, which is said to result from their education. Unfortunately, until now these studies have been no more than suggestive and tantalizing. It could be argued, for instance, that innovations would be disseminated just as quickly if only half as many persons attended college but demonstrations of the innovations' advantages were available to the rest. Nor is the work on health particularly convincing. When the British Health Service lowered the cost of medical services, it managed to equalize their use by different social classes, thus cutting the ground from under much of the empirical work that had been done in the United States on the side benefits of education.

There are many more reasons for justifying present, or higher, levels of postsecondary education on perfectly qualitative grounds, going back to the theories of taste which were championed by old-fashioned sociologists and which have been taken up increasingly often by modern public finance theorists. For example, one could defend higher subsidies for education just because people, or their elected representatives, are willing to vote for them. In this case, however, the policy analyst's duty would be to inform decisionmakers about the consequences of their decisions.

In this connection, we have been well served by two recent studies; one specifically oriented to evaluating the qualitative or sociological effects of education, *A Degree and What Else?*, and the even more recent survey of *The Quality of American Life*. Both provided indices of satisfaction with life by level of education.

The first of these two volumes, a collection of essays about the impact of college on behavior, turns out to be a truly subversive document which leads one to question the value of a college education. The only certain conclusions reached by the authors are that college (1) does contribute to the attainment of high status, (2) may marginally reduce prejudice, (3) increases interest in public affairs (possibly because college graduates can afford the involvement, and have more to lose or gain by the actions of the government) and international matters. Other findings are more moot. For instance, the higher proportion among college graduates of happy marriages and of marriages which resolved initial difficulties could be ascribed to higher incomes (since lack of money is the source of much friction) as well as to college attendance. Elitists may be less comforted by the finding that although college graduates do read more, they do not necessarily have highbrow tastes. The six magazines which led in readership among male college graduates in 1969, for instance, were the *Reader's Digest*, *Life*, *Time*, the *National Geographic*, and *Parade* and *TV Guide*, which tied for fifth place. Among women with college degrees, *Reader's Digest* also won the popularity sweepstakes, followed by *Life*, *McCalls*, *Time* and *Parade*. During the same year, the most popular TV program watched by college graduates was *Laugh-In*. For men, no news program figures among the ten most popular shows, and for women, the NBC news report ranked ninth.

A number of studies have shown that college attendance strengthens personal competence even among those who do not finish college. Yet it is significant that the percentage of respondents who felt that life would work out pretty much the way they desired, and that things would work out as they expected if they planned ahead, declined from 1956 to 1968. The loss in the belief in their ability to plan was *most* prounounced among those with a partial college education. College graduates lost confidence at about the same rate as did high school graduates.

The possibility that an exposure to college may have less influence as the college experience is increasingly democratized inevitably sharpens our interest in comparing the attitudes of college graduates to those of persons with some college education. These attitudes are reported, through a series of interviews held in 1971 and 1972, in *The Quality of American Life*. Perhaps the most startling finding is that college graduates rank no higher on the general index of life satisfaction than do high school graduates, after the results have been adjusted for income differences. (Without this adjustment, college graduates seem more satisfied with life than persons with only a high school education.) The second big surprise in the survey is that the life satisfaction of persons who have had some college, but never obtained a degree, is considerably lower than that of either high school graduates or

college graduates, even when adjustments are made for differences in income.

The study finds repeatedly that there is very little difference between the degree of satisfaction with housing, work, the quality of life in the U.S., etc., among college graduates and high school graduates. However, that satisfaction is always lower among persons who have not finished college.

This holds true even when it comes to satisfaction with marriage; men who have had only some college education are far less pleased with their marriages than are high school graduates, while male college graduates rank just a little below high school graduates in satisfaction with marriage. In the case of women, the satisfaction scores decline monotonically as education increases. College-educated wives are the least satisfied of all wives in the United States.

Perhaps this low level of satisfaction is due to the difficulty of combining family obligations with work. A higher proportion of women with college degrees work, and the proportion of those who are very satisfied with their jobs is about the same as among working wives with a high school education. However the college graduates find their work interesting more frequently than the high school graduates. The wives who never finished college are less satisfied with their jobs than either the high school graduates or the college graduates; they also find their work less interesting, and their chances of promotion much lower than do wives in either of the other two groups.

By contrast, working husbands in all three groups have the same proportion of highly satisfied workers. Male college graduates find their work interesting much more frequently than do the other two groups, but there is little difference in this respect between men who have had some college education and high school graduates.

In summary, these sociological studies of the effects of a college education leave one with the feeling that (a) college does not necessarily produce happiness, (b) a college education is more likely to produce happiness among persons who have high earnings, and (c) a partial college education is likely to cause more dissatisfaction, especially among working women. People whose occupational aspirations are thwarted are less satisfied then those who have achieved measurable gains from their education. The effects of the heedless drive for mass education beyond high school need closer examination.

Not all social scientists will agree with these findings. Howard R. Bowen, in his book *Investment in Learning*, came to a more positive evalua-

tion of higher education. After examining a large number of studies dealing with outcomes of college exposure, he concluded that higher education had a significant positive effect on both individuals and society. He argues that higher education can be justified on economic grounds alone, but this justification excludes a number of other important beneficial effects.

Policy analysts must decide what evidence to trust. Neither attitudinal research nor findings such as Bowen's, which are based on the data of the 1960's, are likely to convince skeptics. It can be argued just as convincingly that in the light of the deterioration of the market for college-educated personnel, policies that facilitate access to college for the ill-prepared should be toned down, and new policies introducing an element of selectivitiy would be timely.

The Urgent Need for New Policies

While scholars can sit back and wait for convincing evidence of the effects of higher levels of education on the economy, on the level of satisfaction of the population, and on life styles, policy analysts do not have this luxury when they see impending changes for which one must prepare.

In the light of the conditions that are likely to prevail in the next 10 years, how should existing policies be evaluated? What new policies should be formulated, and how should they be tested? It becomes urgent to build a mosaic out of existing bits and pieces of observations and develop a coherent theory. This theory should be broad enough and detailed enough in its description of the future to allow analysts to test the impact of alternative proposals.

Our vision of the shape of society ten years from now is central to the judgements that will shape our policies for postsecondary education. If one believes that the "post-industrial society model" best describes the next decade, one may see no need to worry about fine-tuning the subsidies to higher education. In this type of society, dedicated to information-handling, the growth of government and services is projected to skyrocket, and the demand for more teachers, nurses, doctors, and other types of college graduates is likely to continue escalating.

If, on the other hand, one has trouble visualizing an economy run by automated, super-efficient machines, one still has the choice betwen two models. The first of these might assume that the provision of public services will continue to increase, offering employment to persons with above-average education. There are good reasons for taking such a projection with a grain of salt, however. The revolt of Europeans who live in societies oriented to government service against any further expansion of this sector

is a matter of record. The California electorate's vote to curb public spending is an ominous sign of the times. It is most likely that the government sector's expansion will stop in the short run, unless government-provided services decline significantly in price. Such a decline in prices may well occur if the wages of highly educated manpower fail to rise as rapidly as overall productivity. The creation of jobs suitable for college graduates in the public sector may hinge on the willingness of the well-educated to accept lower wages.

The role of government as a producer of services is likely to shrink in the next decade, while the role of the private sector in production and employment grows. Thus, the economic structure of the U.S. is likely to resemble that of the 1950's, with a heavier emphasis on the production of goods. Will propensities to enroll in higher education also be rolled back to previous levels? Not very likely. There are grounds to believe that the number of persons enrolled in institutions of higher education will bear roughly the same relation to the age-eligible groups as it has in the past. If one looks at education at the college level as a form of consumption or competition for places in the line for high-status jobs, one should not expect declines.

The proportion of high school graduates who are willing to spend time taking formal courses to increase their status will not change, but the anticipated lower monetary returns of postsecondary schooling will motivate them to choose cheaper ways of attaining these credentials. The insights of human capital theory are probably most relevant to explaining individual decisions to invest in education. Will students economize by staying away from the high-cost, presumably private, schools, or by more frequently mixing college attendance with full-time work?

An increase in the propensity to attend school part-time would necessarily affect our policies for student support. The most difficult decision would then be whether to offset the decline in the rate of investment in education by higher subsidies. In this connection, the pressure from underutilized university faculties will have to be balanced against a broader view of the effects of lower rates of attendance on the productivity of workers, on social mobility, and on income distribution.

A policy analyst who wishes to fine-tune policy from the federal or state viewpoint must take into account the impact of higher education expenditures and of the supply of well-educated people on both students and the rest of the population. To what extent are increased levels of education used as a signalling device for employers to allocate desirable jobs? Is it possible that the traditionally higher salaries of the well-educated depress the wages of

those with less education? Is a nation's productivity positively affected by increasing the number of more educated workers, or is there a point of no return beyond which education no longer contributes to productivity? Even on a more mundane level, an insufficient amount of reflection has been devoted to examining different kinds of education and their possible effects. There has been an even more astounding silence about the benefits of the newly popular non-degree vocational programs. Do the benefits of vocational training paid with public funds accrue to the individual or to business? Is our present policy encouraging a shift of vocational training from the factory floor to the public junior college?

In subsequent parts of this study, we shall discuss how these shifts in demand may affect the fortunes and the structure of the post-secondary sector. At all times we shall try to keep the perspective of society as a whole as we look into traditional concerns: access, choice, innovation and efficiency in higher education.

II

Higher Education In The Mid-1970's

The reason that policy analysts worry about determining the "right" level of higher education is that education costs so much. In 1975–76, for instance, the costs of higher education were estimated at $65 billion. This figure includes tuition, books, travel, subsidies from public authorities and private donors, an imputation for foregone taxes on school property and revenue loss from tax-deductible donations to colleges and universities, and the lost income, after taxes, of full-time students. This total is roughly equal to the amount spent by Americans on the purchase and maintenance of motor cars—about 4 per cent of the net national product.

Most educators calculate the cost of higher education differently. They include tuition, books, travel, and subsidies to instruction from both private and public sources, but they ignore imputed lost taxes and unrealized earnings. However, they do add the students' living expenses (economists exclude these, arguing that they are incurred by nonstudents as well), and sometimes research and development funds, and receipts for public service activities which are part of higher education budgets. For convenience, this method may be called the "out-of-pocket" approach; it is used more often in day-to-day policy discussions than the more sophisticated method of the economists. The "out-of-pocket" estimate for 1975–76 was $60 billion, including the $10 billion spent on research and development.

Much of this money is supplied by public authorities for three purposes: subsidies to instruction, estimated at roughly $16 billion a year at mid-decade; another $10 billion for research and development; and $8 billion for financial aid to students. Thus, between one-half and three-fourths of the

"out-of-pocket" outlays for higher education are financed by public authorities.

Despite the fact that these subsidies have grown rapidly, nearly doubling in the past 10 years, the volume of complaints about available resources for higher education has also increased. In the following pages we shall examine the reasons for the current dissatisfaction with the level of support for higher education, from the point of view of institutions, faculties, and students.

Institutions

The past five years have witnessed a remarkable turnabout in the financial conditions of institutions. During the education-oriented decade of the 1960's, higher education budgets grew extremely rapidly. The current outlays of colleges in 1969/70 were 375 per cent, in current dollars, of what they had been in 1959/60; in constant dollars, they were 295 per cent. They increased by another two-thirds in the following five years, but the lion's share of this increase was eroded by inflation. Thus, the real rate of growth of the resources of colleges and universities declined from 11.4 per cent a year during the 1960's to 3.8 per cent a year in the 1970's.

The slowdown in the growth of resources created severe strains in many institutions. The previous optimism about the prospects of academia was replaced by gloom and the fear of insolvency.

Why did the financial conditions of higher education take such a turn for the worse? The most-often cited reasons are (1) the slowdown in the growth of enrollments, and (2) the concurrent lack of increase in the real resources per student.

Much of the blame for the current malaise can be attributed to poor planning. Institutions did not anticipate the slowdown in enrollment growth, and thus created many new places, well in excess of the number of students. As a result, some institutions were able to accommodate students at the expense of others, and enrollments declined in roughly one-third of all public colleges and universities and one-half of private institutions. Thus, a substantial minority of institutions had to cope with declining student rolls, while some others had to weather the frustration of missing previously set enrollment targets, even though they continued to attract the same number of students, or even slightly more, than before.

For many administrators and faculty, these events were undoubtedly traumatic. Not only could institutions no longer fill all available student places, but in many cases the resources per student which were produced by

tuition, state subsidies and endowment income shrank in terms of dollars of constant purchasing power. Administrators were forced to reduce the real wages of faculty and other professional staff members. Some institutions economized by increasing student/faculty ratios. Others, especially those with declining enrollments, could not reduce their faculty rolls rapidly enough and were increasingly hard-pressed for money.

What happened to the money? Another reason for the crisis in educational finances, according to some analysts, was the declining popularity of colleges among public authorities. This is not the case, however. Public authorities supported institutions of higher education in accordance with past trends. What actually caused many institutions to slide into penury was the interaction of a number of other, often subtle, influences. Besides the well-publicized decrease in research and development support, for example, there was the slowdown in economic activity, which has not received its proper share of attention.

The proportion of current budgets covered by research and development declined from a high of 20 per cent in the mid-1960's to less than 15 per cent in the mid-1970's. This decline in R&D monies affected only a small number of institutions. In the public sector, the majority of institutions were squeezed because the rate of growth of state appropriations did not keep up with the institutions' expectations. Among private institutions, the main problem was the inability to raise tuition enough to keep ahead of prices.

The slowdown in the rate of growth of state appropriations did not result from a new rise in Philistinism among state legislators, but rather from the fact that the amount of money appropriated to education depends both on the level of affluence of the population and on the number of students enrolled. These two variables are still good predictors of monies appropriated for higher education, as they were in the more expansive 1960's. If money was short, the blame should be placed on the economy, which failed to grow at full-employment levels. Lower levels of production reduce the possible contributions of public authorities to colleges and universities. In 1975/76 alone, $300 million more might have been appropriated to state colleges and universities if the economy were at full employment without changing the proportion of net national product traditionally channeled to colleges and universities.

High unemployment levels also depressed the levels of tuition which could be charged. In recent years, tuition per full-time equivalent student, in both the public and private sectors, has generally moved in concert with per-capita disposable income. Had there been a full employment economy in 1975/76, publicly-supported schools could have expected to collect $224

million more in tuition, and private schools might have expected $266 million more.

The economic slowdown also affected another important source of funds for schools in the private sector: gifts and endowments. The income from these was $89 million less in 1974/75 than what might have been expected in a full-employment economy.

In total, the recession of the early 1970's cost colleges and universities between half a billion and a billion dollars a year. It affected the level of spending both in public and in private schools. Its impact probably was felt most acutely by the schools which lost enrollment. Institutions of higher education seem to behave much like the peddler in New York's Lower East Side, who lost money on each transaction, but made it up on the volume. Every student, it is reckoned, is educated at a loss to the institution, but an institution which loses students is heading for trouble.

This paradox can be explained in the context of the management practices of institutions of higher education. Institutions are loath to cut back on faculty when enrollments decline, but when they take the inevitable step, it is generally the cheaper, younger, non-tenured faculty who are dismissed or not hired. This further widens the gap between costs and revenues. In the past five years, schools which lost enrollment halved the number of their instructors, but the number of full professors scarcely changed.

At first, the public sector was less affected by the slowdown in enrollments than the private sector. During the first few years of the 1970's, most of the public institutions which lost students lobbied successfully for an increase in their subsidy per student. Since these schools generally spent less per student than the schools which experienced no enrollment decline, they could make a reasonable case for increasing the level of expenditure per student. By the middle of the decade, however, most of these schools had caught up with the average spending levels of similar institutions. It appears that they are now being forced to trim their staffs and operating expenditures in the face of further declines in enrollments.

The private schools which lost enrollment—mostly liberal arts colleges and religious institutions—did not believe that their traditional student population would abandon them to the extent that it did. In addition, as noted previously, their revenues were affected by the slowdown in economic activity. Originally, these institutions had both lower costs per student and lower tuitions than the other schools in the private sector, but they failed to trim their costs in proportion to the decline in enrollment, and had to raise their tuitions and fees more rapidly than their peers. By mid-decade, the average tuition in schools which lost enrollment was the same as in the other

private schools. These schools have foreclosed their option of covering increased costs through higher fees.

Ironically, even those institutions which gained enrollment experienced financial difficulties. One of the reasons for their stable or growing enrollments was their ability to cater to graduate and professional students. In many schools, the proportion of these students increased. Since such students generally require more resources per enrollee, it would have been natural for student/faculty ratios in those schools to decline, but they did not. On the contrary, reflecting the penury of their resources, the institutions with growing enrollments actually increased their student/faculty ratios.

Despite the shrinking resources per student, most reviews of offerings by colleges and universities have documented that curriculum innovation is continuing. Perhaps this is not surprising; campuses are competing with each other for students, and so are faculties within each campus. No wonder, then, that new courses are being packaged to meet the predilections of students.

Faculty

The big losers have been the faculty. Their average compensation lagged behind the Consumer Price Index by 2.0 per cent per year in the early 1970's. Examined rank by rank, in many cases the comparative position of faculty is even worse. The average compensation of the higher-ranking faculty lagged behind the CPI by 2.6 per cent per year. So did that of instructors in four-year institutions and in private junior colleges. Only in public community colleges did the average rise in compensation exceed the rise in the price level.

Another way of assessing the relative deterioration of full-time faculty wages is to compare them to what they would have been if teachers' wages had increased in concert with the wages of all men with five or more years of college. In 1970/71, the average faculty wage was .73 of the earnings of all full-time, full-year male workers of the same educational level. If they had kept the same relationship, by 1975/76 the average faculty wage would have been $19.2 thousand, instead of $16.5 thousand. Adjusting this figure for the three years by which the faculty's mean age rose, one would expect the average faculty wage to be $21.2 thousand in 1975/76, or 28 per cent more than it actually was.

Generally, the faculty became more and more uncomfortable as new openings declined in number; mobility between one school and another slowed down, and young Ph.D.'s, as well as untenured faculty, found it

increasingly difficult to secure either new or tenured positions. Young researchers in the sciences, unfavorably affected by the decline in R&D activities, were increasingly hard put to find jobs in their fields. Humanists were the hardest hit, and many sought alternative careers.

Full-time faculty increased by 58 thousand between 1959/60 and 1964/65, and by 120 thousand between 1964/65 and 1969/70. In the last five-year period, ending in 1974/75, it increased by only 31 thousand. Part of the slowdown in hiring was due to the slower growth in enrollments, and part to the increasing number of students per full-time teacher. This increase in the student/faculty ratio was due to the larger proportion of students in junior colleges, where these ratios are high. Elsewhere in the postsecondary sector, the student/faculty ratio remained unchanged. Usually those schools which gained enrollment kept their student/faculty ratios steady or allowed them to increase only slightly. The schools which lost students, however, did not prune their faculty rolls rapidly enough, and their student/faculty ratios decreased.

Two surprising developments have affected the faculty during the past five years. In the first place, administrations are continuing to promote existing faculty members to tenured positions. The continuation of this trend flies in the face of logic, since it means that institutions are restricting their options in accommodating to future changes in enrollments and curriculum demands.

Secondly, faculty unionism, which has become quite widespread, is taking a peculiar academic character. It has been directed more to protecting jobs than to gaining salary increases, especially for senior faculty. As a result of all these trends, the mood of the faculty is now at an all-time low. If this mood affects their productivity in teaching and research, we will all be the losers.

Students

Young people who were eligible to enroll in college in the 1970's behaved quite differently from those of the 1960's. First, the proportion of 17 and 18-year-olds who graduated from high school stopped growing; and second, a smaller proportion of high school graduates decided to enroll in college, particularly among males. Because projected increases in the propensity to enroll did not take place, freshman classes were some 20 to 25 per cent smaller than had been expected on the basis of past trends.

This decline in enrollment rates affected students from all income groups, except the children of parents with very low incomes. High school graduates from this group continued to enroll in college at the rates observed

during the peak years, while the others reduced their enrollment rates by some 11 per cent overall—25 per cent decrease for men, and an 8 per cent increase for women.

The dynamics of enrollment by children from different social backgrounds or economic classes are not clearly understood. Economists have argued that the decision to enroll or stay away from postsecondary institutions is rational, based upon calculations of the rate of return from "investment" in education. They believe that the recent decline in the enrollment of men is a response to the falling earning prospects of the college-educated. The increasing enrollment of women may be due to their realization that they will spend an increasing proportion of their working lives in the labor force.

Others find this explanation too pat, and ascribe recent changes in enrollment propensities to changing political and social conditions. They argue that avoidance of the draft no longer draws men to postsecondary education, and that changing ideas about the appropriate role of women in society are encouraging more of them to enter colleges and universities. Whatever the reasons, the rates of access to higher education are now roughly equal between men and women, attenuating one earlier concern of policy-makers.

By contrast, the need to find an equitable formula for financing the costs of college is still very much with us. States provide per-capita subsidies for instruction to students who attend public institutions, and have also started to make outlays to private institutions. However, the lion's share of scholarship money is currently provided by the federal government under a series of programs which have sprung up partly as a result of historical accident, and partly as a conscious program to encourage children from economically weak households to attend college. In addition, both states and the federal government have actively encouraged and subsidized loan programs for lower- and middle-income families. Recently states have also stepped up their scholarship programs.

Roughly half of the money channeled by the federal government to students is distributed without any rigid definition of need. Most of this money is given to veterans, most of whom are independent of their parents. Budgeted at some $2.8 billion in 1977/78, this program is a living testimonial to the difficulty of abolishing or containing expenditures which are popular with the electorate. The original program was introduced after World War II, partly from fear that the unemployment level might reach unacceptable levels if all veterans were allowed to flock into the labor market simultaneously, and partly from gratitude towards people who had spent the flower of their youth in the military. The program's early effect was serendipitous, as it trained a whole generation of managers and technicians in time for one of the periods of faster growth in the American economy.

After Vietnam, the economic situation was very different. Nevertheless, educational allowances for Vietnam veterans were justified on the basis of post-World War II experiences, without much analysis of the desirability of increasing the stock of college-educated persons, or even the equity of favoring veterans over other groups. The legislation was passed despite studies which showed that veterans did not suffer any long-range deleterious effects on their careers or earnings from their experience in the military.

The whole matter of veterans' educational benefits is rapidly becoming a non-issue, since the number of eligible veterans is declining and, therefore, the money likely to be required for them is shrinking rapidly from year to year. Subsidies to veterans remain an issue, however, as education pressure groups try to lay claim to this money to finance other aid to higher education.

Another federal program is only indirectly related to student need. This one is administered by the Social Security Administration, and it consists of payments to the dependent children of deceased and retired beneficiaries, between the ages of 18 and 22, as long as they attend college or other training courses. An analysis of the beneficiaries of this program, dating from the early 1970's, indicates that more than half of the funds that are distributed under it go to children from families with less than the median income. Despite this ratio, however, the Social Security program distributes more money to the children of middle-income families than does any other single government program.

How equitable this program is remains open to question. Some have defended it as desirable insurance for bereaved children, but others have criticized it for subsidizing a part of the population which probably has more assets than the average. It has also been argued that if the government wants to help orphans, a more efficient program could be devised.

Such criticisms may be well-founded. Nevertheless, the program will continue to be justified as cushioning the shock of a traumatic loss, which it does, and the 1.8 billion dollars which it requires are firmly imbedded in the budget.

Need-based programs for undergraduates are administered by HEW's Education Division. The largest of these, costing $2.0 billion, is the Basic Education Opportunity Grants (BEOG) program, which offers grants to students, depending upon the educational costs incurred and their presumed ability to pay. The money goes to students from families in the lower half of the income distribution and to older, independent students, many of whom are veterans and use these grants to supplement their stipends from the V.A.

The operation of the BEOG program is difficult to evaluate without taking into consideration the operation of other federal, state, and private

programs. Among the major federal programs are Supplemental Education Opportunity Grants and Work-Study programs, both of which channel money through institutions. In addition, state programs now contribute a not-insignificant half to three-quarters of a billion dollars in student aid funds. Institutional funds and private donors are thought to contribute up to a billion and a half of additional funds for both graduate and undergraduate students.

Some economically weak students borrow money, in addition to receiving grants. Two federal programs provide loans to students. The older and smaller of these programs channels loan funds to students through institutions. Originally introduced in the wake of the launching of the Russian Sputnik, this program has survived with its anachronistically low interest rate of three per cent, even though Congress deleted the incongruous forgiveness provision for all persons who enter teaching, a profession currently plagued by surpluses.

The second program, which channels $800 million a year, consists of federal or state guarantees of loans made to students. Although a number of institutions participate in this program and facilitate the loan applications and disbursements, access to these loans is not conditioned on a student attending a given institution.

In all cases, the government pays the interest on loans as long as the students remain in school. During the recent period of high interest rates, the government also subsidized the lenders of guaranteed loans. The annual costs to the Treasury, as reported in the budget, are the interest subsidy (to students and institutions) and the principal of the loans in default. In 1978/79, these amounted to $730 million.

According to our estimates, which are based on a variety of sources of varying accuracy, almost all of the subsistence and education costs of one in seven full-time undergraduates from families with incomes under $7,500 per year are met by a combination of grants, loans and work. Perhaps as much as one-eighth of the costs of students in this income group is met by loans, and another 30 per cent by work.

Students in the next higher income bracket, whose parents earn between $7,500 and $15,000 per year, benefit much less from grants, and finance about the same proportion of their total costs through loans. They depend considerably more upon parental contributions and income from work. Children of parents in this income bracket used to enroll in college at a far higher rate than those from poor families, but the difference is diminishing.

Among students whose families have incomes above the median, most of the support comes from parents, followed by the student's own earnings. Grants and loans probably do not account for more than 10 to 15 per cent of their costs.

To summarize, current aid policies have helped children from economically disadvantaged families to enroll in college. However, they have not equalized attendance rates for students by income group.

In the mid-1970's, for the U.S. as a whole, roughly three out of ten dependents 18–24 attended college full-time. Four out of ten young dependents from affluent families, those with incomes over $25 thousand, were enrolled, as contrasted to two out of ten dependents from families with incomes under $10 thousand. In the middle-income range, one out of four dependents were studying in a postsecondary institution full-time. Thus, despite the fact that the enrollment rate of children from modest backgrounds had not declined from the peak attained in the late 1960's, it was still below that of children from more affluent families.

It appears, too, that students from poor families now stay enrolled in postsecondary institutions for a shorter period of time than 10 years ago. Despite the fact that the proportion of freshmen from families in the lowest-income group increased in relation to the total number of freshmen enrolled, this income group's share of total enrollment has not changed. This is all the more surprising since among those who enrolled in college since 1965, 42 per cent completed four years of education, 10 per cent more than college entrants before that date. It is likely that postsecondary students from families with modest means attend college for shorter periods in the 1970's than in the 1960's, and that a smaller proportion of them receive a Bachelor's degree.

This hypothesis makes sense in the light of the very rapid growth of non-degree programs, which are offered mostly by junior and community colleges. It is quite likely that these short-term programs appeal to students of modest means, both because they are offered by institutions where the fees and costs are low, and because they are of short duration.

In any event, the current system of conventional postsecondary education seems to appeal most successfully to children from wealthier families. Roughly three-quarters of all enrolled dependent undergraduates come from families with above-median incomes.

Some 23 per cent of full-time college students consider themselves independent of their parents. This is a considerable increase over the 10 per cent who did so in the 1960's. Many of these students are veterans, or

married. Some of the others do not want to put any financial burden on their parents, so they have become independent.

Graduate and professional students: It is important to distinguish between the graduate and professional sectors of higher education. Most professional, i.e., law and medical, students attend school full-time. By contrast, more than two-thirds of the students who are enrolled in graduate programs attend part-time. Therefore, most graduate students work during the school year. Stipends and research assistantships are more common among full-time graduate students than among professional students. Overall, full-time students beyond the bachelor's level are estimated to earn some 40 per cent of what they could earn otherwise. Much of their earnings comes from government-financed research and development projects. Despite the recent cut-back from a peak of $3 billion, the federal government still spends over a billion dollars on support to graduate and professional students. About a third of this support is channeled to medical schools and the rest is earmarked for special programs, e.g., the training of nurses, psychologists, etc. Educational policy has remained pliant to the demands of professional pressure groups and is subsidizing graduate studies in many specialties where shortages can no longer be documented.

The role of all these public subsidies in graduate education is not clear. Possibly a larger portion of the graduate money is now being channeled into post-doctoral fellowships, which are holding positions for young Ph.D.'s. While it is hoped that the most promising of these researchers will establish their reputations sufficiently to become irresistible to the research and development or academic establishments, no evidence yet justifies this hope.

Part-time students: An increasing number of students attend post-secondary institutions part-time. Most studies have shown that their incomes do not differ significantly from the incomes of persons the same age who do not attend school. This does not mean that expenses connected with education may not be onerous for some part-time students, but, given the rather spartan standards which govern eligibility for aid to undergraduate students, most part-time students are not eligible for federal stipends. Only a very small proportion of the aid goes to these students. Some have tuition and fees paid by employers or other organizations, but the majority pay for their own schooling.

At the graduate level, employers are more likely to foot the bill for part-time study. Graduate students' incomes are also higher than those of undergraduates, and there is little concern about how they finance their education. The only demand for subsidies to this group comes from proponents of "life-long" learning and from a few educators who believe that mid-life career changes should be facilitated by public authorities.

An Evaluation of Postsecondary Education at Mid-Decade

Historical forces have shaped a relatively strong postsecondary sector in the United States. One cannot but admire the extent to which these forces have been responsive to the demands of both society and students. The rapid growth of technical schools and junior colleges in the past two decades is a dramatic demonstration of the extent to which the system can innovate in a period of growing enrollments.

The slowdown in the rate of growth of the national economy, which coincided with the leveling off of postsecondary enrollments, has forced institutions to change their operating styles quite drastically. There is no evidence as yet that this change has substantially weakened the sector as a whole. Hence, it is premature to ask whether the public authorities were justified in withholding additional institutional support.

A number of developments made it very difficult to justify much higher state appropriations for higher education in recent years. The recession and the slow recovery of the economy kept down state and local tax receipts, while unemployment and welfare payments depleted the public coffers. Concurrently, no persuasive arguments could be marshaled to show that an insufficient quantity of higher education was provided, since the sum of public and private places exceeded the number of students.

Nor could objective policy analysts argue in favor of drawing more persons into higher education. On the contrary, they could not help but view with alarm (1) the increasing proportion of college graduates who took jobs which were hitherto filled by persons with less education (the narrowing wage differential between college graduates and persons with a high school education indicated that the investment in four years of schooling was becoming less profitable than before, and the relative drop in salaries could be interpreted as a signal that both private and social returns from education were declining) and (2) the continuous homogenization of the jobs filled by persons with partial college training and by high school graduates. (Although their wages did not decline relative to those of high school graduates in the 1970's, persons with a partial college education had lost considerable ground in the previous decade and never gained it back. The calculated rates of return for persons with an incomplete college education were very low in the period beginning with 1960.)

As the link between more education and productivity becomes increasingly tenuous, it makes sense to reduce public expenditures on additional education. An easy and obvious way to achieve this aim is to put a limit on subsidies for the instruction of students.

While politically well-connected state colleges were able to accommodate more students by tapping state funds, private institutions could not expect to be bailed out by public moneys. The subsidies which are currently offered to the private sector are not designed to shore up the finances of schools which lose enrollment. The great suprise, in the past five years, has been that so few of those schools did close their doors. Those which closed accounted for a small proportion of the enrollment, and they closed after having reached a sub-optimal size.

To cut costs, some state school systems have resorted to downgrading certain campuses and designating them as branches of other institutions. The administrative overhead can thus be reduced, while the number of locations serving students remain unchanged. Possibly some private, especially sectarian, institutions could consolidate several small campuses into a "system" in a similar way, in order to cut costs while preserving diversity.

Although it is possible to suggest some cost-cutting techniques for institutions, e.g., consolidation, greater dependence on consortia to reduce the duplication of courses, etc., this may not be the appropriate time to do so. We have witnessed considerable efforts to reduce the costs of higher education in the past five years, and inevitably it was the faculty who bore the brunt of this cost-cutting.

The high rate of production of Ph.D.'s, in relation to suitable openings for persons with this level of education, has greatly weakened both the bargaining ability and the mobility of older faculty. This is the visible part of the iceberg. An even larger, though invisible, part of the problem is the underutilization of the research training of young doctoral recipients, especially in the humanities, and of older persons who had to seek jobs outside of academia because they did not receive tenure.

This underutilization of doctoral recipients puts into question the role of graduate departments. While schools with less experience in graduate education are likely to offer masters' degree programs, the major research universities prefer training doctoral candidates. Lately, they have reduced the number of doctoral students, but overall the production of Ph.D.'s has not declined. While doctorates awarded in engineering, chemistry, physics and mathematics are below the early 1970's peaks, the number of doctorates awarded in the social sciences is still growing.

Turning to the problems of students, one should first stress that the philosophy underlying much government policy has been influenced by the criteria for financial aid developed by the College Entrance Examination Board and the American College Testing Service. Both these organizations have developed standards of contributions by families which take into ac-

count current income, unusual expenses, assets, and family size. The expected contributions are derived by assuming that families with students in college and above-minimum income and assets ought to contribute a high percentage of their resources above this minimum level, which is set arbitrarily. However, the actual contributions differ from those expected under these schedules. The average family contributes much less than expected, and a small minority—which send their children to private schools—contribute much more.

In practice, federal policy sweeps such variations under the rug. The BEOG program is most effective in enabling students to enroll in the cheapest conceivable programs. The rest of the need-based programs are distributed in such a way as to compensate for the cost of attendance in a given institution. Depending upon the whims of college aid officers and the allocation of aid to a given school, a small number of students from families with modest backgrounds could receive a lot of aid, while others content themselves with the BEOG alone.

Campus-based aid is allocated capriciously state-by-state and institution-by-institution. There is some anecdotal evidence about the games financial officers play to increase their allocations of institution-based aid. It is quite possible that some institutions use it as a bait to attract needy students to otherwise unattractive programs.

It is not at all clear to what extent the needs of lower-income students are unfulfilled. The recent experience of state aid commissions has indicated that the supplementary aid offered to lower- and middle-income students is not fully taken down in some states. Perhaps these states have less-developed private systems, or else the private institutions may have been competing less energetically for students from lower-income families.

By contrast, complaints about college costs have been escalating among the more affluent members of our society. Until recently these complaints were ignored by public authorities. Yet it was obvious that such complaints would escalate in the 1970's, as an increasing number of families were likely to support more than one dependent in college. These families' perceptions of financial burden became more acute as a result of inflation and the recent slowdown in economic activity. Real incomes failed to rise as rapidly as anticipated, and progressive taxes took an increasing share of the lower-than-expected incomes. Instead of paying college bills out of expected increases in incomes, many families had to cut into equity or lower their standard of living. The former alternative is turning out to be particularly costly. For the majority of Americans, the major equity is in the home. Most families with college-age children have low-interest mortgages, and refinancing a mortgage is extremely expensive.

In addition, most Americans are not accustomed to the high interest rates, on the order of 12 per cent, which are now charged on personal loans or second mortgages. Hence, some families may feel asset-rich, but cash-poor.

The more affluent families, whose children are more likely to live on campus, feel unfairly discriminated against by present practices in the analysis of needs. With students still at home four or five months of the year, they feel it is not possible to reduce their expenditures on housing. If the *Wall Street Journal*'s anecdotal accounts are to be believed, such families are also loath to reduce their standard of living, or feel that they must keep up with the Joneses to maintain their status in the community.

No very good reason can be adduced for public authorities' subsidizing an affluent standard of living. But, in practice, public authorities do. Thus the children of affluent parents who attend public colleges in their state of residence are heavily subsidized. Parents whose children are accepted in elite, high-cost private schools, on the other hand, are forced to meet truly astronomical bills, as much as $8 thousand per dependent per year. On the average, the well-off parent pays some 80 per cent of this bill, and it is understandable that this hurts.

For families with children of nearly the same age who choose to attend private schools, even the less expensive institutions can cost between $10–$15 thousand a year for two or three children. Nearly half of the families with incomes over $25 thousand are in this boat.

The better-endowed schools have been quite responsive to this perceived hardship. Yale and some other Ivy League schools originated student loans with repayments contingent on the students' future incomes, and hired more students to run such day-to-day activities as food services. Recently Harvard offered to make low-interest loans to parents, amounting to as much as $6,000 a year, on condition that the parents' income was less than $60,000 a year. Current federal guaranteed loans are less generous with respect to both amount and income eligibility.

The possibility that Congress will pass a tax credit benefiting the affluent has paralyzed education policymakers and has deflected attention from the needs of part-time students. The needs of this ever-growing population have been confused with those of independent students. There is a common belief that students whose families are well-to-do qualify for financial aid by declaring themselves independent after having dropped out of school for a short period, such as a year, or through other subterfuge. In fact, these students are treated differently than dependents and more stringent standards are set to allow them to qualify for aid. All their income is

counted as available to pay school bills, and more stringent contribution standards are enforced.

The whole issue of dependent and independent students should be treated in the context of parental responsibility for their offspring's education. Should their responsibility last forever, or should the student's age, marital status, or veteran's status be *prima facie* evidence that the responsibility has run out?

Part-time students represent an entirely different set of problems. These are best separated into two components. First, should a student who attends a postsecondary institution part-time and, for any reason, has a minimal income, be helped? And second, is it equitable to require students with above minimal, but still low incomes, to pay tuition and fees out of this pittance? Most thinking about the adequacy of student aid has been dominated by the needs of full-time students, and by the urge to facilitate their access. Whether the treatment of part-time students is equitable has not been considered.

This is all the more surprising since the incentives to attend college full-time are now declining, both in terms of returns on one's investment in education and in terms of the guarantee of a "good" job upon graduation. For example, less than two-thirds of those who received their bachelor's degree in 1976 and entered the labor market obtained good jobs. Even among master's degree recipients, only eight out of ten were so favored. There are indications that the promotion prospects of those who start their careers in less desirable jobs are none too good at present.

We are thus truly at a crossroads. We will have to reexamine the uses of a college education in the course of the next few years. A very high proportion of the population regards exposure to education beyond high school as both a right and a rite of passage. Among college-educated parents, whose children are the heaviest users of colleges and universities, the desire to have their children attend prestigious and expensive colleges is not matched by a desire to pay the bills. Increasingly, the affluent resent that the poor have a "free ride" while they have to pay.

A clearer understanding of the consumption components of college, and the investment effects of college, may be overdue, not only for parents and students, but also for policymakers.

III

The Coming Crisis In Academia

The next decade will try the souls of those connected with colleges and universities. Enrollments are projected to go down. Funds for instruction will grow more slowly than in any period since World War II. The 1980's may well become the Dark Ages of higher education, as college graduates will find it increasingly difficult to land jobs which utilize the training they received.

This chapter examines how institutions, faculties and students are likely to fare if there is no drastic change in the pattern of support of higher education. It points out that the changing demographic conditions which affect enrollments are likely to force some institutions to close their doors, and to produce a major downturn in the fortunes of faculty members.

Institutions

The basis for this pessimistic prognosis is the slowdown in the rate of increase of real resources for instruction in higher education. Between 1965 and 1970, these resources grew at the rate of 5.0 per cent per year. By 1970–75, the rate had gone down to 3.5 per cent. Even according to our most optimistic projections, the rate will decline to 2.7 in the period 1980–85.

Until 1980, the decline in the growth of resources is not likely to threaten the slender balance between outlays and expenses in either the public or private sector as long as three conditions are met. First, professors must not be allowed to make up the losses in real income which they experienced in the past few years; second, student/teacher ratios must continue to

creep up; and, finally, the costs of those institutions which lose students must be tightly controlled. We have assumed in our projections that some institutions with declining enrollments will cut their costs in proportion with the decline in their workload and others will be closed. If not, and if the amount of money for postsecondary education remains the same, other, more healthy, institutions, which we anticipate would enroll students from schools which closed, will have to cut their staffs and weaken their programs.

To avoid deficits, even more drastic economies will be required in the 1980's, when resources will grow at an even slower rate. Institutions in the private sector will have to cut costs even more energetically than before. Those with low enrollments and high costs probably will not be able to survive this period, and their students will be redistributed to larger, lower-cost schools.

How severely this crisis will affect schools in the public sector in the 1980's will depend on the level of economic activity in the nation as a whole. If the economy resumes its high rate of growth and the contributions from state sources increase accordingly, incomes and outlays will balance in state-supported institutions. In the more likely event that the economy will continue to limp, these institutions will require economies amounting to perhaps 5 percent of current expenditures on instruction in order to balance their budgets.

No one can predict what form such cost-cutting will take. Even though faculty compensation is likely to continue lagging behind average wages in the economy, it may not be possible to balance budgets solely at the expense of the faculty. Other economy programs, such as curbing the size of the administrative staffs, will also be necessary in all institutions. In the public sector, efforts to move students from high- to low-cost institutions probably will be initiated.

These prospects spell trouble for academia. The most severe problems will be faced by those institutions which continue losing students, roughly one-half of the private and one-fourth of the public schools. Unless such institutions consolidate their operations and effect large savings in instructional costs, their existence is in danger. Many of the practices and policies of both public and private colleges and universities will have to change. Faculty members and administrators who have spent their whole adult lives in a period of uninterrupted growth find these new conditions most disturbing. They have not adjusted to operating in a no-growth environment, and are likely to resent policies that are likely to be imposed by boards of trustees or state legislators.

Our non-system of higher education is too diverse to make it possible to generalize about the impact of these conditions on all institutions. Colleges and universities will adjust in different ways, depending upon their mission and their constituencies.

The national interest dictates a special concern for the fate of the research universities. The problems of these universities differ from those of the rest of the postsecondary sector, since they are unrelated to changes in the level of undergraduate enrollment. With one or two exceptions, the major research universities will continue to turn away a large number of undergraduate applicants and fill their undergraduate rolls. Even if total enrollments in postsecondary institutions decline by 10 or 15 per cent, they are still likely to fill their freshman classes.

However, the number of graduate students in many of these schools has been shrinking, partly because students have become disenchanted with their prospects of finding jobs in teaching or research, and partly because some of the leading schools have made a conscious decision to limit spaces in graduate or research programs. A few research universities have a policy of subsidizing all graduate students who are deemed worthy of admission. The shrinking federal support for graduate fellowships and assistantships has made this policy more costly. Even though the decline in the training of doctoral students at some institutions should not be viewed with alarm, considering their dismal prospects for employment, this decline may have a very negative effect on the operations of the research universities.

The savings that result from reducing the graduate fellowships and scholarships are not as great as might appear at first blush. The net increase in tuition receipts (after scholarships are deducted) is probably negligible, and these students no longer provide a cheap pool of labor to teach undergraduates and assist in research and development work.

To the extent that this pool of cheap labor is shrinking, the research universities' costs may go up, as more senior faculty are assigned to teach lower-division courses. The pace of applied research may also slow down, as the shortage of graduate students to do the more pedestrian tasks in laboratories discourages some professors from undertaking "messy" projects.

Senior faculty in the research universities will be increasingly underutilized as they are forced to do less research and give less graduate instruction. Instead, they will be pushed into the classroom to teach younger students, and will resent these teaching chores.

Further problems may center on the cost of doing research. Young Ph.D.'s who cannot find appropriate jobs immediately after graduation and

do not want to leave the academic environment have been replacing graduate students in growing numbers in the laboratories. This has caused the cost of research to increase far beyond what is allowed under the rules of thumb used by federal funding agencies. To meet the stringent cost ceilings, several major research universities have slowed down their updating of facilities and instrumentation, which has caused alarm in scientific circles.

Another dark cloud over the research universities is their growing inability to innovate by attracting new faculty. Most of their senior faculty is senior in name only, and nearly half of the tenured professors are under 50. Mobility between campuses has virtually ceased. Most of the aging professors just stay on, blocking the promotions and appointments of younger, promising faculty. Pressures to cut costs and promote junior faculty from within have caused second-string institutions to stop enticing name faculty during their declining years, when they become less productive. (Rather than be faced with the cruelty of peer evaluations at the research universities, burnt-out researchers used to move to lesser schools, where they could bask in their past glories and add luster to less distinguished colleagues.)

These trends, which manifested themselves with some force from 1975 on, are likely to continue throughout the 1980's. As a result, the research universities are likely to be much less exciting and innovative places ten years from now than they are today—and there may be nothing to take their place.

Many of the reserach universities' problems could be solved merely with the infusion of money. If between one-third and one-half a billion dollars per year were allocated to these schools to permit them to hire more faculty, they could probably hire sufficient numbers of new teachers and researchers to remain viable and innovative intellectually. Yet even with these generous subsidies, their faculty turnover rate would be half of what it was in the 1960's.

The political problems involved in channeling such large amounts of money to the research universities without any strings attached are nearly insurmountable. If the money were given in the form of research and development grants, however, the social sciences and humanities would be excluded. At the same time, the foundations for the arts or humanities can hardly be expected to distribute large amounts of money to elite institutions when the Congress directs them to become less elitist. Congressmen view the universities not only as repositories of knowledge, but also as important sources of expertise for community service, teaching and football. The research universities are weak in all these functions, and hence will have a hard time mobilizing special treatment.

Another approach would be to encourage the research universities to expand their undergraduate enrollments on a large scale. With higher enrollments, these institutions could hire more staff, who would work in research-oriented environments. They might also introduce special incentives to make it more attractive for older professors to teach undergraduates.

This solution opens up a Pandora's box. Either the research universities would have to lower their standards for undergraduate admissions, or they would have to create new financial subsidies for gifted students, or both. Lowering admissions standards to increase enrollments would certainly go against the interests of existing faculty. It is only since the end of World War II that the cream of the private research universities became intellectually homogeneous. Before this time they served a less gifted, but very rich constituency of students, who treated the faculty with the consideration due to servants. As to large subsidies for the gifted, politicians are unlikely to vote for them and other institutions would resent the research universities' "creaming" of the student body. Besides, if limited endowments were stretched to support additional numbers of students, middle- and upper-income parents who send their children to these schools might find the tuition increasing at an unacceptably rapid rate.

All policies that would help the research universities are likely to have adverse effects upon other institutions which have developed special strengths and expertise in selected disciplines, or with regard to the needs of a given geographical area. These institutions, which include many of the state systems' flagship schools, would find their missions endangered if they were unable to recruit gifted students for their more practically oriented graduate programs. Because of their high local reputations and their substantial influence in state legislatures, as well as their excellent connections with congressmen from their states, these schools have generally fared better than run-of-the-mill institutions. They can be expected to attract a larger proportion of the declining pool of students, and will probably continue to do well.

As in the past, the flagship schools in most states are likely to have the fewest problems in keeping their faculty busy, and in some states where the number of eligibles for college is not expected to decline drastically, they may even expand their enrollments at the expense of schools with less prestige. The danger they face, in the political arena, is that they are doing too well, causing other parts of the state system to be underutilized and to complain bitterly to the legislature. In some states, e.g., California, pressure is increasing on the University system to put a lid on its enrollment to safeguard the clientele of the state college system. If these pressures become universal, the flagship schools, especially those like Berkeley, Chapel Hill

and Madison, which are also research universities, will share the problems of leading private institutions.

We have argued that policy should be focused on preserving the strengths of the academically distinguished schools. This focus is quite different from that of most policy discussions today, which are concerned primarily with the fortunes of schools which are losing students or can no longer operate in the way to which they have been accustomed.

There is little doubt that the wisdom of bailing out schools with declining enrollments will continue to be discussed with increasing urgency during the 1980's. On the one hand, some private liberal arts colleges, some sectarian schools, and all colleges that are committed to teacher education are likely to have trouble keeping their former levels of enrollments. Many of these schools command substantial loyalty from alumni, and some have a distinctive atmosphere or program. Unfortunately, as the reputation of public-sector schools and especially flagship schools has improved, the public of these "non-public, non-flagship" schools has started deserting them. Many of these schools are too poor, too proud, or too inflexible to change their orientation. They still cater practically exlusively to full-time students, and their offerings are mostly in the liberal arts or teaching.

The public policy issue is whether they should be subsidized so as to continue contributing to the "diversity" of the American higher education system. While part of their trouble is caused by the availability of cheap, state-subsidized places in state colleges, the case for aid to private colleges will be more difficult to argue during the 1980's. Students who might formerly have been accommodated in marginal private schools will easily find places in other schools with better reputations. In a dynamic context, it seems clear that help to keep these schools going will weaken the schools which would benefit from their closing.

The arguments in favor of aiding schools that are losing students have been confusing. On the one hand, the friends of these schools have been proclaiming their uniqueness and the difference between their approach or curriculum and those of neighboring schools. On the other hand, the very same friends have argued for a temporary infusion of aid to help these schools change their administrative practices and curricula so that they more closely resemble the schools which are competing successfully for students.

I believe it would be best for federal policy to keep its hands off the issue of diversity, with the possible exception of sponsoring some modest experiments to help small, failing schools to help themselves. The monies from the Fund for the Improvement of Postsecondary Education ought to be sufficient for that purpose. A particularly promising project for these schools

would be to offer a new, integrated work-study environment, where much of the blue- and white-collar work in the institution would be performed by students. They would thus be able to attract an increasing number of part-time students, even to the remote rural areas where many of these institutions are located.

To conclude, if state support of postsecondary education follows past trends and the current relationship between tuition and disposable income continues, the United States may expect to have a viable, but less exciting system of higher education ten years from now. The prime attention of policymakers should be directed toward the research universities, to make sure that these remain able to innovate in their fields of leadership.

Faculty

The large number of Ph.D.'s in pursuit of a small number of jobs is making the faculty most vulnerable to institutional economy drives. As the supply of persons with doctorates increases by some 40 per cent between now and 1985, the total demand for faculty will remain at its present level or decline slightly, and the scramble for jobs will be even more desperate than it has been in the past few years. In the first five years of the decade of the 1980's, the number of job openings is likely to be some 6 to 10 thousand a year, one-half to two-thirds of what it was between 1975 and 1980. By the end of the decade, we may, with luck, return to the level of hires of the past five years, i.e., some 15 thousand a year.

With competition for jobs reaching cut-throat dimensions, any number of excuses can be offered by a financially hard-pressed school to reduce the number of faculty members or to keep a lid on salaries. In practice, both of these activities are easier to implement simultaneously: the threat of faculty cuts is sufficient to keep down the salary demands. In some schools, faculty unions have fought hard to protect the number of jobs and have shown less concern about the level of salaries. These unions were dominated by young faculty members whose jobs were threatened. By contrast, established unions, such as the one at the City University of New York, have been adamant about protecting salary levels and have sacrificed large numbers of junior faculty members to preserve the level of pay.

By the mid-1980's, the emphasis on salaries is likely to prevail. Faculty unionism will increasingly take on the characteristics of other white-collar unions. More faculty will be tenured, and the distinction between tenured and non-tenured faculty will be blurred as union contracts will increasingly guarantee job security after a short trial period, irrespective of rank. The majority of public institutions will be unionized, with only a few private

prestige universities, distinctive liberal arts schools and some schools with religious affiliations remaining outside the realm of collective bargaining.

The unionization of faculty is likely to have a number of unintended consequences. The most important for the national interest is the effect of job security on institutions' ability to hire promising researchers to replace faculty who turn out to be disappointments. Union contracts make it impossible to fire minimally competent staff. This may lead to the proliferation of separate institutions to perform research, along the Livermore model, and accentuate even more sharply the separation between research and teaching.

Separate research institutes, with their own staffs, might then be staffed largely with "research bums" whose floating existence from one research project to another would still seem preferable to jobs which do not require their expertise. Openings for mixed careers in teaching and research are likely to become increasingly scarce between now and the end of the century. The number of such openings is projected to shrink by half in the period 1975–85, as compared to the period 1965–75. New research organizations would most likely rely on a small permanent management group, as well as a revolving cadre of young, cheap researchers who recently graduated from universities. Thus, if the young cadres did not unionize, they would not be able to enforce their seniority rights.

There is no consensus about the minimum levels of scientific or cultural manpower which this country either wants or can afford. Nor have convincing projections of the employment of such manpower by age been prepared. There is little agreement about the true value of experience, compared to the imaginative approaches of the young. Hence, it has been difficult to draw the attention of policymakers to the fact that we are likely to have a disproportionate number of older scientists and humanists during the 1980's, and that the share of younger teachers and researchers will be well below previous levels from 1985 to the end of the millennium.

Of course it is not absolutely necessary for scientific theory, humanistic research, or higher criticism to be created in a university or research setting. Since many of their corporate and government jobs will require less than their full energy and commitment, the creativity of the underutilized intellectuals could be stimulated in avocational, rather than professional, milieus. Separate milieus sustained the creativity of Darwin, McCauley, Gibbon and Mill as they worked at unstimulating jobs. Non-academic centers of this sort need not be located at universities. They might be developed independently. Their chances of survival would be better if they were free-standing, rather than grafted onto colleges and universities whose faculties might resent the work of potential competitors and possible scabs. Just as businessmen meet

at Kiwanis and Lions Clubs, so would intellectuals meet in small groups, adapting the idea of the salon to the American way of life.

The alternative to this eventuality is to provide non-directed think tanks for intellectuals. If half of all doctoral recipients were given a chance to prove themselves productive in these think tanks for perhaps three years, and two out of ten of this group were retained there for the rest of their working lives, by the end of the 1980's the cost of such a program would approach $5 billion per year.

Students

One of the most obvious priorities in student aid is to raise the reimbursement ceilings in the BEOG program at a rate greater than the increases in the cost of education. This change in the formula will increase aid to eligible students who attend somewhat higher-cost schools. As more students move away from low-cost, four-year schools and enroll in the states' higher-cost flagship institutions, it behooves public authorities to make it possible for students from economically weak families to participate in this trend. Coordination of state and federal scholarship programs could ensure that the children of the poor are not necessarily consigned to institutions which cater exclusively to the academically unprepared and economically weak.

It is also important for public authorities to reallocate funds for campus-based aid in keeping with the ebb and flow of students from one institution to another. The availability of publicly financed campus-based aid is a powerful attraction to students from modest circumstances. There is considerable urgency for rechanneling campus-based aid from institutions which are losing students to those in which enrollments are steady or rising. Yet in the past few years public policy has moved in the opposite direction, freezing aid levels on the basis of allocations made in the more distant past.

In an ideal world where the bureaucracy knew the desires of students, and students knew that the aid they were likely to receive would not vary from institution to institution, such shifts in public funds could be effected quickly and painlessly. In the real world, however, much care must be taken to have the money precede the students without it being shifted so quickly that needy students are left behind without funds. If funds are moved too quickly, they will be distributed to students with higher incomes, at least for a while, until the needy students catch up with them. This would then lead to resentment among the better-off students who lose such support, adding to the already considerable pressure to enact new legislation to subsidize students in the middle- and upper-levels of the income distribution.

Whether public authorities should subsidize students who are better off is one of the two most important issues which will have to be resolved in the next few years. (The second issue, the problem of equalizing the costs of attendance in public and private institutions, will be discussed a little later.)

There is little doubt in my mind that political pressure will force public authorities to reimburse better-off, and possibly even rich, parents for part of their children's college costs. These parents spend considerably more than the average on tuition, and thus do not benefit as much from state subsidies to instruction. Reimbursement of the college costs of students, irrespective of family income, would mean a break with previous policy which has emphasized giving the disadvantaged access to more schooling. We have recently recommended that payments of up to $1,000 per student be made available to parents who have unusually high college expenses, with tuition costs exceeding a given percentage of their gross income. We fully realize that these payments will generally benefit persons whose incomes place them in the upper quartile of the income distribution. Unfortunately, in the absence of such a scheme worse legislation, such as the tax credit or token payments to middle-income parents, will be passed.

Transfers to the more affluent are likely to have positive effects on the financial conditions of the research universities, a segment of the higher education sector which needs both sympathy and attention. Federal payments to persons who have high expenses will encourage the research universities to raise their tuition. Students' families will not get the major part of the benefit; the institutions will. On the other hand, parents of students will be grateful for the illusion of a subsidy. Some $300 to $400 million spent in this fashion might have blocked the move for tax credit legislation which will cost at least a billion dollars.

It is more difficult to judge how the federal government might best help to equalize the costs of attendance in public and private schools. Such measures would have been much easier to recommend 10 to 15 years ago, when there was a shortage of student places. At present and during the next decade, as the weaker private and public colleges increasingly compete for students, it will be very difficult, politically, to aid either the private schools or the students who attend them. The federal government has entered the field gingerly with the State Student Incentive Program, which reimburses states for part of the scholarships they offer their residents. Much of this money goes to students who attend private institutions. Requiring such scholarships to be made available to students who attend out-of-state schools, too, would undoubtedly benefit some private institutions even more. This would also be to the advantage of such prestige public schools as

Michigan, Wisconsin and North Carolina. In the future, it may be desirable for the federal government to cost-share with states only on rather sizeable incentives, such as $1,000 per student for students from families with incomes under $15,000, and $500 for other students. Most of these scholarships would go to students in the private schools.

A final thought on student aid may be in order. If the public authorities continue to value giving students from modest circumstances access to post-secondary education, they may wish to reduce their reliance on loans. Many of these students will not last the full four-year course of studies and will get little economic benefit from postsecondary attendance. In this light, it would seem fair to reimburse a higher proportion of the costs incurred by freshmen and sophomores who are eligible for Basic Education Opportunity Grants. If the half-cost limitation were waived and 75 per cent of students' costs were reimbursed during their first two years of college, the cost of the program would increase by some $1.5 billion.

The changes in student aid which we recommend in order to keep higher education enrollments at their previous level may cost as much as $3 billion. This price tag seems frightening only if one forgets that roughly the same amount is spent on veterans' educational subsidies today, and that these are likely to be completely phased out of the budget by the 1980's.

Conclusion

America's knowledge industry will be greatly weakened if public support to colleges and universities remains tied to enrollments and to the level of the nation's economic production. In order to avoid such deterioration, public policy for higher education will have to go beyond aid to students and tackle other areas of urgent concern.

Foremost among these is the problem of finding suitable employment for a whole generation of young scientists and humanists. These young people are unlikely to be hired either to teach or to do research in colleges and universities. If they are employed elsewhere, their specialized skills will be underutilized, and the pace of innovation in our intellectual life will slow down.

How can we provide what amounts to sheltered employment for intellectuals under our present system? The easiest way would be to subsidize a few research universities to continue expanding their faculties and thus take care of the cream of the crop of graduating doctorates. However, this is unlikely to be popular during a period when a number of smaller, possibly less distinguished, but much-loved, institutions will be forced to close their

doors. Our political system is better attuned to helping classes of persons, or institutions, rather than to funding programs based on merit.

Yet, unless billions of dollars, at present prices, are found to support the generation of scholars which will go into the work force in the 1980's, we may be entering one of the darkest periods of depression for academia. The problems of fine-tuning aid to students, or responding to the pressures of the middle class for a share in student subsidies, loom large only inasmuch as they are likely to reduce the funds available for this operation.

Parental or student resources are not likely to play a major part in determining enrollment levels in the next decade, as long as present aid programs are in place. On the other hand, giving students from families of small means a greater choice of schools may require a drastic restructuring of the distribution of this aid. It is to be hoped that these administrative problems will not steal the limelight from the real policy issues.

IV

Some Unconventional Solutions

Good policy planning should anticipate the unexpected, and a very persuasive argument can be presented to the effect that college enrollments may plummet even more drastically than is generally anticipated.

By the mid-1980's, the cohort of 18-year-olds will contain 17 per cent fewer members than the comparable cohort of the mid-1970's. The total number of youngsters eligible to enter the labor market will be considerably smaller than it is today. This means that, most likely, instead of worrying about teenage employment rates of some 13 per cent, we may be decrying the shortage of young workers! Therefore, government subsidies, such as scholarship and loans for college students, which reduce the labor participation of young persons, could well fall into disfavor. With highly educated workers still in oversupply and still burdening the labor market, the knee-jerk reaction may be to get the kids out of school and into jobs.

By then the implicit social benefits from more education and the social demand for more schooling will be balanced on a knife's edge against the more tangible benefits from jobs. This may lead some to argue that the government has no business giving young people the incentive to invest in relatively unproductive higher education which keeps them away from productive work. Such arguments will be most convincing with respect to marginal students who are not likely to complete four years of college education and for whom a few years of additional schooling would prove least profitable economically.

There has been considerable reluctance to make realistic preparations for this eventuality. Educators and policymakers have been much too concerned with shoring up today's shaky system to think about hypothetical disasters. Meanwhile, analysts who are distraught about the present surplus of college graduates have been advocating charging full cost for higher education, and relying on the market to balance the supply and demand for college graduates.

There is increasing agreement that our system of subsidizing both students and institutions should change. There is no agreement on what should be done. Below we discuss three possible ways of changing the system. The first, and most brutal, was conceived by laissez-faire economists; it advocates that students pay the total cost of their education beyond high school and, if need be, finance that cost through loans. The second, diametrically opposed to the first, envisages that the major share of instruction and living expenses be shouldered by public authorities; it is essentially the Swedish model. We also present a third, new and eclectic model, which channels subsidies to part-time students and to a few, selected, full-time students.

The Laissez-faire Economists' Prescription

Economists who regard education as an investment in human resources would prefer each student to bear the full burden of the cost of higher education. In this way, they hope to reduce the demand for higher education and balance the supply of jobs requiring this level of training with the number of persons who continue their education beyond high school.

These economists' prescription is justified by concern about the fact that subsidies to higher education benefit the rich disproportionately. It makes these economists uneasy that only half of a given cohort enrolls in college, and that the very people most likely to be blessed with high incomes as they grow older enjoy large educational subsidies from public moneys, collected by taxes on less affluent groups. Therefore, they would prefer to charge the full cost of education to students, with the students' fees and living expenses financed by loans if necessary and/or desired. They insist that such loans be freely available at the market rate of interest, and that public authorities be made responsible for satisfying the loan demand, to eliminate the imperfections in the capital market.

Not all economists agree on how such loans ought to be repaid. Some advocate conventional borrowing with long repayment terms, others propose that the loans be repaid in proportion to the recipients' incomes.

While there is nothing very complex about repayment formulas for conventional loans (except getting students to repay them), a variety of repay-

ment schedules has been proposed for income-contingent loans. Some would set repayments at a straight percentage of the borrower's income. Others would set repayments at a percentage of the borrower's income above a certain amount. Considerable imagination has gone into proposals to equalize the burdens of contingent loans between spouses, and to make it possible to "buy out" of the program so as not to scare the potentially affluent, etc.

Rather than describe all these flights of ingenuity, we shall limit ourselves to an evaluation of student loan programs in general. Clearly, if the benefits of higher education are translated only into higher earnings and accrue to students rather than to society at large, the present system of financing education beyond high school is unfair and loans would be much fairer.

Whether these loans should be conventional or income-contingent, however, is open to argument. Advocates of straight loans argue that the price of entry to the escalator for success should be the same for all entrants, and that the most gifted, or lucky, who parlay their education into higher incomes later on should not be penalized. It is further argued that contingent loans are likely to attract persons with marginal abilities, who may view their participation in higher education as a low-cost lottery: If they acquire more saleable qualifications, so much the better; but if not, the penalty will not be very high either. This criticism of contingent loans applies particularly to loans which tax only incomes that are above a certain minimum. With such loans, the lottery will cost much less to those who benefit least from higher education.

By contrast, advocates of contingent loans argue that students who have to take out large conventional loans to cover both the full cost of instruction and their living expenses would find the repayment burden imposed by such heavy borrowing too much for them in the years immediately after graduation. As their incomes rose, however, so would their ability to repay. Another, more tortuous argument goes something like this: It is difficult for students to evaluate the benefits of education in advance, but it will become easier when lending authorities, which are interested in having the loans repaid, encourage "truth in education" disclosures to students.

The economic arguments for financing higher education through loans are attractive, but there is little chance that such financing will be adopted in a period of retrenchment for the postsecondary sector. Devices for the rationing of student places should have been introduced when there was a shortage of them. At that time, they would not have been opposed as vehemently as they are likely to be now. Unfortunately, it takes a long time for

economic theory to be developed, and by then political forces may come into play which make the theoretical prescriptions non-operational.

Many of my colleagues in the economic profession do not share my pessimism about the prospects of financing higher education through loans. Yet I feel that even their optimism is tempered by realism, for they do not go further than to recommend relying on loans more heavily than in the past.

Since financing through loans is not likely to come about, we will not try to trace its potential effects on institutions or faculty. Let us just add that some advocates of loan financing would like to make sure that students who are enrolled in the same school but in different programs pay fees according to the cost of the program in which they are enrolled. Thus, students in cheap liberal arts programs would pay less than those in expensive science programs. This would lead the faculty to an agonizing reappraisal of what ought and what ought not to be taught.

The Swedish Model

Some educators and politicians favor adopting a very different, but equally extreme policy for financing education, in line with the experience of Sweden. There the government takes a much more active part in financing both postsecondary institutions and postsecondary students. No fees are charged to students. The total burden of supporting postsecondary institutions is shouldered by the state. The state has assumed that all persons age 19 or older are to be subsidized when attending school. Parents' and spouses' incomes are disregarded. All students are entitled to a basic grant, which is supplemented by a loan bearing a low-interest rate. These loans are generally long-term, with students obliged to repay them by age 50. Postponement of payments is automatically granted to borrowers who are ill, unemployed, or have incomes below a certain threshold. With some 60 per cent of all student expenditures advanced by the government in the 1970's, the program has facilitated the access of children from working-class families and women to higher education.

The Swedish travail in administering this system may be of interest to advocates of transplanting such a system to the United States. As long as there was a brisk demand for college graduates, the system of allocating money to institutions worked relatively well. Every qualified entrant was guaranteed a place in a university, with the exception of medical and engineering schools, which kept predetermined ceilings on their enrollments. Recently, as the job market for college graduates soured, an increasing number of entrants opted for vocationally-oriented courses, just as in the United States. This led to a decline in university enrollments and to a strug-

gle with regard to the amount of funds which different institutions were to receive from the central government. The Swedes then attempted to defuse these controversies by decentralizing the decisions to six regional boards. This policy is much too new to be evaluated.

It is also significant that the amount of grant money for students has leveled off in the past few years, and that students with no other source of support have had to rely increasingly on loans.

In the pluralistic American system, support of all institutions by federal, state and local grants would require a fundamental rethinking of the responsibilities of public authorities for the private sector. Various models for the support of private schools can be found by looking across the Atlantic: The Swedes gradually took over full responsibility for their private universities; the Dutch reimburse private universities for the cost of instruction, based upon levels in the public sector; and the British channel funds to a number of institutions through a grants committee. However, not one of these countries attempts to deal with hundreds, let alone thousands, of institutions with different standards, curricula and costs.

Within the next 10 years, the only feature of the Swedish system which could possibly be implemented in this country is its financing of students. The recent enthusiastic advocacy of aid to middle- and upper-income parents of college children is sufficient evidence that there is both unease and resentment in all segments of the population about paying college bills. The "Swedish way" relieves all parents, irrespective of income.

It would be very difficult to adapt this to American reality, however. With a postsecondary system in which fees vary from institution to institution, floors and ceilings for reimbursement of these fees would have to be established and, probably, a uniform living allowance added.

At current cost levels, such a program would require disbursements of close to $18 billion for undergraduates, and probably an additional $2–$3 billion if graduate and professional students were made eligible. Even on the assumption that the number of students would not increase, it is likely that with a practically universal system of support, tuition and fees would. The cost of the program might then escalate (at current prices) to, say, $25 billion. It would remain equal to the current level of student aid only if grants were kept to 15 per cent of the program's cost. In this event, students from poor families would have to borrow much more than they do today.

Institutions and faculties would benefit from this new approach to student financing, which would provide additional resources to the postsecondary sector. Both the employment level and faculty wages could be raised. At the same time, as long as ceilings on the level of subsidies remained in

effect and the lion's share of the program were financed through loans, students would remain conscious of the costs of different programs.

The most obvious disadvantage of the program is that it would channel resources to hitherto unsubsidized well-to-do students. A less obvious drawback is that it encourages full-time study, and may not be appropriate for the 1980's, when there will be shortages of youth-manpower. Nevertheless, proponents of the fully-automated, cybernetic society, who anticipate no great upsurge in the demand for labor, may wish to keep this pattern in mind in reforming student aid.

The Eclectic Model

Realists will not take the classical liberal economists' advice to rely fully on loans too seriously. Nor will they be very optimistic about the possibility of underwriting the lion's share of the cost of the higher education along Swedish lines. Therefore, we have proposed another model for subsidizing students which would be better attuned to the needs of the 1980's. We call it the eclectic model.

The eclectic model attempts to meet the following objectives: (1) reduce students' investment in postsecondary education by allowing them to study and work concurrently, (2) allow students to graduate earlier than they would under existing patterns of part-time attendance, and (3) at the same time, increase the supply of young workers. Schemes that allow students to economize on their investment in education are particularly desirable at a time when the financial returns from additional years of schooling may be expected to shrink. As long as a major component of the investment is foregone earnings, the obvious approach—short of escalating scholarships as in the Swedish model—is to encourage concurrent study and work.

The eclectic model is based on the assumption that the majority of young persons are likely to want a taste of postsecondary education, just as they do today. It suggests that they can get it by registering for 2/3 of the full-time school load (8–10 credits) and also working some 25 to 30 hours a week. This would mean that the students would obtain their bachelor's degree in six years rather than four. For their part, employers would be encouraged to split two jobs among three youngsters, a reasonable solution since there would be a shortage of young workers.

To make this plan work, we recommend that part-time students be reimbursed for their tuition, fees, transportation and books, and also receive a small stipend ($150 a month), if they participate in the labor force and are employed at least 40 weeks during the year, working no more than 25 hours

each week. The average stipend per student in this program would amount to $1,200.

This would create an incentive for young people to work and study at the same time, thus addressing the issue of youth labor shortages. Concurrently, this proposal would make it more attractive for employers to hire part-time students, since it would result in more productive workers at a lower hourly cost. In other words, employers could obtain better quality workers, at a lower price, because these workers would receive an additional subsidy for their studies.

This work-sharing experiment would be a success only if the scheduling, employment and social-security costs of hiring three persons to do two jobs did not exceed the beneficial effects of the subsidy. Perhaps additional tinkering with the social security and unemployment contributions might be necessary to make the program sufficiently attractive to employers. However, we will not know what level of subsidies would be required to make the program work until such a program is actually put into effect and adjusted.

Because of its financial incentives, this program might become so attractive as to discourage the cream of the academic crop (especially potential full-time students from families with modest means) from attending full-time, and thus postpone their entry into professional and graduate schools for many years. To counteract this trend for the more gifted students, special incentives would have to be devised for these students to attend full-time. Probably as many as half a million students should benefit from such incentives. We propose copying the British subsidy system: offering generous unit scholarships, sufficient to pay a major share of any school in which the students are accepted, and making these allowances taxable to their parents. Thus rich parents would benefit less than the poor, whose marginal tax is lower. Some cross-over from one program to the other should also be encouraged.

The gross cost of this program may be as high as $7–8.5 billion in today's prices, but if all the subsidies are taxable to recipients, it is likely that a quarter of the cost will be recaptured through income taxes. The cost of the program will depend to a large extent upon the pricing policy which institutions adopt in the light of (1) increased support for students, and (2) the probably decline in their workloads.

The fact that the majority of students are likely to be supported will certainly tempt institutions to increase their tuition. The merit scholars will not be deterred by this increase, however, and it may be argued that the part-time students with heavy work commitments will eventually be reim-

bursed by the proposed subsidy or else are capable of paying higher fees anyway, because of the level of their earnings.

Even assuming that higher education is still prized as a sign of status, and that the total number of students does not change drastically, the fact that many more students will attend school part-time is likely to result in a 20 per cent decline in institutions' workloads.

The Impact of Part-Time Enrollments on Institutions and Faculty

As a result of conditions in the labor market which make it easy for young people to find jobs, or changes in student aid which encourage work concurrent with higher education, a much higher proportion of students may opt for part-time study. Perhaps they will again become increasingly oriented to the humanities, social sciences and general education for their own sake, even though they may realize that such subjects will not be of much practical use in the world of work. On the other hand, the fierce competition for jobs is more likely to motivate students to choose practical fields. In this case, accounting, business administration and training for semi-professional occupations, such as drafting, elementary mechanics and electronics, etc., will dominate students' interests. These choices might have different effects on different types of institutions.

While today's institutions are capable of meeting demands for general education, they may require different and possibly more expensive resources if they wish to offer "majors" in practical fields. Even such mundane majors as business require high capital investments in computers to round off the theoretical aspects of instruction.

In either case, institutions that are located close to large labor markets are likely to benefit if students shift from full- to part-time studies. This is particularly true of schools in metropolitan areas, where jobs are available, though the increasing suburbanization of white-collar jobs and the consequent movement of many potential students to the suburbs may jeopardize the prospects of some central-city institutions.

Isolated schools in small towns and rural areas would suffer most from the shift to part-time studies. Unless they had some claim to academic distinction and continued to attract sizable numbers of full-time students, they would have little chance of limiting the decline in their enrollments sufficiently to remain viable. This would lead to an increasingly polarized higher education system, with "prestige" research schools at one end of the spectrum, and either trade or low-selectivity schools at the other.

This dichotomy is not consonant with the American tradition. Furthermore, the elite schools might well find themselves in tighter financial straits than those catering to part-time students. Assuming that the majority of part-time students were employed, their financial capacity to pay fees might be greater than that of full-time students who still depend on their parents.

The part-time students might either attend classes at night during the academic year, or use such innovations in scheduling as intensive weekend courses and two- or three-week-long mini-courses. The mini-course pattern has been tried successfully in the U.S.S.R., providing part-time and correspondence students with access to intensive tutoring before examinations and to physical science laboratories, neither of which could be made available during the normal academic year.

There would be a risk that institutions which catered to part-time students might become either schools for generalists or trade schools. In the former eventuality, their economic value might be low, but their social value might be considerable if they contributed to greater sophistication and cultural awareness in the general population. If they became trade schools, they might have more economic justification, but employers would reap the benefits and an important part of our postsecondary subsidies might become a hidden investment credit to business.

Meanwhile the colleges that continued catering to full-time students might become escalators for "top managers" and other professionals. This would lead to a considerable change in orientation. At present, much of their faculty is oriented to training future university teachers. However, this source of demand will virtually dry up.

If an increasing number of students attend courses part-time, mostly evenings and weekends, the temptation to hire part-time faculty to teach them may become hard to resist. Part-time teachers cost less, since they are paid a fraction of the salaries of full-time teachers and do not benefit from any of the fringe benefits. They could easily be recruited in urban areas from a large pool of persons with advanced degrees, many of whom might be eager to enhance their status by establishing an academic affiliation.

If between a fifth an a third of all instructors taught part-time, this would wipe out all net new openings in academia and research. The need to salvage promising researchers would then become even more acute in the next ten years. Instead of a $5 billion program to stockpile promising young researchers, we might have to devise a program costing $10 billion. The alternative is to watch a whole generation lose its skills through lack of use.

Summary

Three possible approaches to student financing have been presented: the laissez-faire economists' approach, the Swedish model and the eclectic model. All three are radically different from the rather puritanical, need-based approach which is generally accepted today. Each one addresses the needs of society somewhat more flexibly than the present system, which was devised to suit conditions which no longer exist. In the past, when the social return from higher education was substantial, it was sensible to equalize the chances of poor and rich in the degree sweepstakes; today, when the returns from winning the race are less certain and hence the social returns are lower, a more selective approach is indicated.

Which approach should be recommended depends upon one's value judgements. Thus, policymakers who believe in the wisdom of the market will find that increased, and possibly exclusive, reliance on loans makes sense.

For those who believe that it is better to subsidize higher education than tobacco or steel, the Swedish approach, which requires only the smallest sacrifices from students who pursue their education beyond high school, will have a great deal of appeal. Under this system, students who did not complete their degrees would probably lose very little, and, at least in Sweden, with its progressive income tax, those who completed their degrees would not gain very much either. Since higher education is more widespread in the U.S., however, the costs of the Sedish approach would be higher here, and instead of reverting back to the state in the form of higher taxes, the benefits would stay with the individual. With tax reductions on the horizon, this approach would be difficult to sell in the present political environment.

The eclectic approach has much to recommend it. It meets the needs of the times by reducing the cost of participating in higher education and by distributing the bulk of the subsidies to young workers, who soon will be in short supply. We believe that it is not too early to propose it, since it is different enough from the present pattern to require a number of years of discussion, examination and modificantion before it is, perhaps, accepted as the pattern for our future policy of student aid. Unfortunately this approach does not solve the problem of how to safeguard and use highly-trained researchers and academics in a period of declining enrollments. The need for a manpower policy that would achieve this looms large on the horizon. If our guess is correct, it will also weigh heavily on federal budgets in the next few years.

V

Can Policy Be Turned Around?

Federal policy for higher education has tried to satisfy a multiplicity of claimants with rather modest amounts of money. The principal responsibility for supporting the cost of instruction in higher education rests with the students' parents, the students themselves, state governments and private philanthropy. Federal subsidies started to play an important role in this area only recently and indirectly, through assistance to students.

The federal subsidies can be divided into three categories. First, a most heterogeneous and wide-ranging package of aid originates in the Education Division of H.E.W.; second, funds for research, development and graduate studies are provided by a number of agencies with narrower interests; and finally, there are substantial transfer payments to veterans and orphans.

The last two types of programs cannot be relied upon to solve any of the fundamental problems in our system of higher education. The level of outlays for research and development, the stipends to graduate students, and the support for veterans and orphans are set either with specific national goals in mind, or as a result of pressures from specific groups of beneficiaries. They are generally distributed to the advantage of those who are already in the system, rather than those trying to get in. It would be impractical to try to use these funds to solve the problems of specific categories of schools or of students. Therefore the burden of "doing something" to help higher education adapt to new conditions in the next ten years will be borne either by some new organizations, or by the Education Division.

It is not easy to change the direction of educational programs in the present political climate. Especially in the recent past, Congressional proposals to add money to higher education have been motivated by political considerations rather than by considerations of long-range policy (*vide* the tuition tax credit). The limited federal role in education and the continuing unwillingness to expand this role by spending more money result in a chaotic appropriations process.

Ever since the middle of the Johnson Administration, Congress and the Executive Branch have had different priorities for higher education legislation. When the Administration tried to put a limit on spending by eliminating some programs, Congress continued to fund them.

Because of this difference of opinion, Congressional staffs have increasingly pushed for more detailed administrative provisions to be included in the legislation itself. Hence, the hands of the Executive Branch have been tied, and it has not been possible to change the orientation of several programs so as to fill existing needs, rather than serve the clientele for which these programs were designed a decade ago. Innovations by the Administration have proved to be sure-fire recipes for trouble. Only small programs have escaped Congressional scrutiny and have been allowed to zig and zag with the needs of the times.

Education does not easily submit to rational policy planning, and higher education least of all. Everyone in Congress has had at least 16 years of exposure to education and most elected representatives still have close ties with college presidents and professors. Thus, the best laid plans of budget people and planners concerned with the public interest are not likely to receive a sympathetic hearing on the Hill, unless they are consistent with the moment's political priorities.

The Education Division may never have the opportunity to impose a rational policy because of these diverse influences on the legislative process. Unfortunately, the responsibility for innovation must rest with the Division because of the open-ended nature of its mandate. The principal piece of legislation through which it channels money to colleges and universities and their students is the Higher Education Act. This law has been amended repeatedly and now serves several different purposes. The lion's share of its funds currently goes to student aid that is designed to equalize access to postsecondary education among children from different income groups. In addition, small amounts of money are allocated to adult education, libraries, schools that have financial problems, and some graduate students. The authority of this Act is due to expire soon, and preliminary discussions of new policy initiatives have begun within the Education Division.

Current Concerns

It is surprising to what extent past concerns still dominate current discussions of policy alternatives. Much of this conservatism is due to the absence of any incentive to broaden these discussions. The constituency which the Education Division serves is both fractured and resistant to change. The junior colleges, the senior public institutions, the private schools, and the elitist institutions with strong graduate departments all carry on separate lobbying operations. Although they have enough clout to abort efforts to change legislation, however, the members of this constituency have been unable to agree on new legislation, or propose legislative innovations of their own. Quite recently they have lobbied for more money from the federal government, backing measures which would give each group a proportionate share of the increase. Most of the time the Administration is too busy beating off those raids on public funds to bring up questions relating to the national interest, or to try to alter the distribution of aid in line with each group's previous share of the moneys.

This atmosphere casts a pall on the creativity of the Education Division, making it too timid to entertain any larger vision. Whether they are career or political appointees, most members of this Division feel embattled, unappreciated, and underrepresented in the high councils of government. There is a pervasive feeling that for every desirable innovation, constituencies have to be bought off with more money for less desirable goals.

Within government, and especially in the Office of Management and Budget, the Education Division is perceived as the tool of the educational establishment, which tries to extract as much money as possible from the federal treasury. On the Hill, its image is one of a lumbering, ineffective bureaucracy which should be replaced by a check-writing machine.

In fact, however, the Education Division is more complex. It shelters a small band of idealists who are concerned with equal access to education, and a much larger group of battle-scarred veterans, who defend their programs against criticism and cement alliances which allow these programs to grow. The principal weakness of the Education Division is its failure to become a center for hard-headed planning for all of education.

Because of its present timidity, the Education Division's innovative activity has been directed to peripheral fields. Thus it displays considerable enthusiasm about doing something for adult education, helping black colleges, and opening the doors of graduate schools to minorities. In the area of student support, some lip-service is paid to giving students from disadvantaged backgrounds more choice of institutions, and to giving wealthier students more opportunities to borrow. These issues were formulated in the

1960's; nothing new has been added, nor has there been any direct cognizance of the changing conditions which make these issues less relevant today. In the field of adult education, for example, the shortage of upper-level jobs now makes mid-career education less likely to pay off. The federal government's integration efforts and the decline in college enrollment have put a new face on the need to aid developing institutions and black colleges. And the likely surplus of Ph.D.'s demands a careful reanalysis of the programs that encourage minority students to enroll in graduate, if not professional, programs.

The New Priorities

Nowhere in the present agenda of the Education Division can one find any plans to deal with the issues which are likely to be of top priority in the next 10 years. Two of the three issues below have been preempted by such other organizations as the National Science Foundation and the Foundation for the Arts and Humanities. During the next decade, we shall have to take action to:

(1) save a generation of scientists and humanists who will not be able to find suitable jobs in academic and research environments.

(2) safeguard the intellectual potential of the research universities, which will not be able to afford to hire the young staff that would allow them to remain creative or renew their intellectual capital, and

(3) re-examine the programs which channel aid to economically deprived students, lest the new availability of jobs for young workers which is expected in a few years lures them away from continuing their education.

These are major issues, and they will be difficult to resolve—particularly now when, for the first time in decades, higher education is taking on the characteristics of a stable or declining industry: not only is its clientele shrinking, but the value of its marginal product is also declining.

As those who are in the political mainstream of Washington know, declining industries with strong lobbies usually put up a desperate fight to have their resources shored up and to protect themselves against the deleterious effects of the market. There is little doubt that higher education will muster its backers and put pressure on the federal government to escalate support to all institutions or, failing this, to those institutions which are likely to sink in the unfavorable climate of 1980 to 1990.

The drive to preserve existing institutions will also result in pressure to pass legislation encouraging students to enroll. There will be campaigns to fill the empty seats in colleges and universities with the old, with high school

dropouts, and perhaps even with bureaucrats, who may be directed to accumulate college credit before they can be promoted, or possibly to keep their grade. The small victories achieved by egalitarians against credentialism in recent years are likely to be wiped out.

More important, the large number of college graduates among new entrants into the labor force may encourage a kind of educational escalation. If credentials play a large part in determining earnings and access to "good" jobs, the recipients of bachelor's degrees may feel increasing pressure to get one more degree to enhance their employment prospects. This trend would run counter to all efforts to rationalize the demand for education.

The Government's Dilemma

The changes which must be made are easy to summarize, but difficult to implement. It is essential to introduce new programs to put educational legislation in step with the needs of the times without sabotaging the social progress of the last 15 years. The old priorities—equalizing access to higher education for all income groups and increasing the retention of students from the deprived families—should not be lost. At the same time, we must redirect subsidies to increase the proportion of young persons who opt for work without reducing their opportunities for postsecondary study.

It would be easier to deal with tomorrow's problems by supporting legislation that would increase funds for traditional constituencies than by fighting an uphill battle for new programs. Nevertheless, there is an urgency to begin reorienting our programs. We need funds for the researchers and thinkers who will be graduating in the near future, in order to prevent a break in the continuity of the nation's research establishment and a resulting loss of potency. New administrative mechanisms must be developed to move resources into programs that will maintain the thrust of our research.

First, however, Congress must be convinced that the surplus of Ph.D.'s is not ephemeral, that it will plague us for at least a couple of decades—certainly until the end of the millennium—and that it results from little demand. Thus, limited efforts to finance young Ph.D.'s for a few years after graduation would merely postpone the problem, without solving it.

In order to tackle the problem effectively, policymakers will have to make some important decisions: how many researchers should be subsidized? How they should be chosen? What performance criteria should be established to make them eligible for continuing support?

There are no clear-cut models for us to follow. Unlike European research institutes, government-run laboratories and research organizations in

the U.S. are not dominant in their fields. In some fields, such as anthropology, literature and philosophy, there are no government-sponsored centers at all. If a new mechanism requiring a kind of triage of intellectuals is established, some thought must be given to who would make the crucial choices. To what extent can we entrust them to academia, with its intrigues? Should we develop some sort of commissions or panels that could exercise their choice free from the bigotry of institutional loyalty? In order to keep support for researchers within reasonable financial bounds, the triage of the worthy would have to be repeated again and again. And after that would come further decisions about the renewals of grants: how often should they be renewed, and by whom?

It would be tempting to try to solve the problems of the research universities and researchers simultaneously. But if so, how would these universities be chosen? Should we support outstanding departments, or limit ourselves to outstanding institutions? Arguments abound for either policy. Supporting outstanding departments by offering them "free" researchers or teachers would spread the program among many more institutions. This is a potential plus. On the other hand, this policy would run the risk of blocking the kind of breakthroughs that result from the cooperation of researchers in several disciplines. The synergy could well develop between disciplines which are not cooperating today. Or perhaps, in order to avoid charges of favoring a few elite institutions, it would make sense to establish regional centers only loosely affiliated with universities.

Difficult and politically sensitive as the problems of our research posture may be, they are dwarfed by the challenge of reshaping student aid in such a way as not to penalize marginal entrants to postsecondary institutions. Currently, the federal government is subsidizing the cost of a no-win lottery ticket for two out of three economically deprived students. These students are not likely to complete four years of higher education, and they will not be rewarded for their foregone incomes while attending school.

While it is well and good to approve of the cultural benefits of postsecondary education, the economic costs to the children of economically-weak parents loom very large in establishing the cost/benefit ratios of this education. Sixty per cent of all students and the vast majority of students from low-income families go to college in order to get a better job. If better jobs are not likely to be available to marginal students, most of whom come from poor families, it is wrong to encourage such students to give up earnings in order to participate in higher education.

It would be even more cruel to close the doors of higher education to smart and motivated but ill-prepared students, however, especially to those

whose academic deficiencies are due to the environment in which they grew up, or the schools they attended. One can be practical without being elitist or prejudiced against late bloomers. If one prizes social mobility as much as I do, one insists on preserving the opportunity for young people to bet on themselves whatever the odds. I am urging, though, that the price of the bet be calibrated in such a way as to give marginal students a large number of options.

The proposals to promote work and study which were described in Chapter Four were designed with precisely this objective in mind. In practice, such programs would have to give students the opportunity to cross over from the work-and-study program to the full-time program, if they so desire. At the same time, the better students might need a chance to compete for scholarships which would allow them to study full-time.

The introduction of heavy subsidies for work and study and the full-time scholarships for outstanding students would totally change the federal scholarship effort. Although it seems easier and more convenient to subsidize students on the basis of certain measurable economic attributes, this must be abandoned. Instead, public authorities must take part in the process of selecting students who will be placed in specific programs on the basis of achievement, despite the political difficulties involved.

Some may call these suggestions impractical. They certainly do not build on the cozy relationships which have already been established, and which make the political survival of programs possible. Civil servants and political appointees would find it easier to continue with the care and feeding of existing programs.

Yet our review of likely developments in the higher education sector has convinced us that the existing programs, operated in conventional ways, will not solve the problems of higher education. If colleges and universities were all alike and their products fairly uniform, one could produce an orderly shrinking or decompression of higher education by borrowing from the practices commonly used in sheltering declining industries. One could try to give subsidies based on some parity, as in agriculture, protection from foreign competition, and, possibly, subsidies to exports. Unfortunately, higher education is unlike any other industry, both in process and in product. Its institutions have served different missions. Some institutions are essential to maintaining our intellectual leadership. Others have such important goals as supporting our technological leadership, fulfilling vocational training needs, etc. Thus, in the difficult period ahead, the key officials in charge of subsidizing higher education will have to make choices based on the relative importance of the missions, and will have to put their judgement on the line. Until

now, they have never done this explicitly, and it is urgent for them to establish their credibility soon.

Problems of Transition

Quantum leaps in policy take a great deal of time and energy—especially when they require abandoning some objectives and replacing them with new ones. Old constituencies have to be pacified, new constituencies must be formed, public opinion and political alliances must be cultivated.

The current organization of the federal government does not prevent these steps from being taken, nor would any reasonable reorganization of the Education Division. Starting tomorrow, some modest steps could be taken to build up the capacity of the federal government as a planner of the future of higher education.

For example, the federal government could pioneer in introducing work-and-study programs, both in order to show that such arrangements are practical, and to gain experience in ironing out the difficulties involved, many of which cannot be foreseen today. If employment for 25 or 30 hours a week could be provided for students who study two-thirds time, the effect of this combination on the performance of these students could be observed. Federal authorities are in a particular good position to start such a program: Their experience with part-time employment of professional women would come in good stead to administer this innovation.

A program for some 20 thousand Presidential scholars, chosen on the basis of tests and recommendations similar to those used to award Merit Scholarships, could also be offered. If the proceeds of the scholarships were taxed to the students' parents, the net cost of the Treasury of full-cost scholarships, covering both room and board at institutions where the scholars are accepted, should not exceed $70 million in 1979/80.

Such innovations would send a signal to the Hill and to the educational community that the Education Division has a leadership potential. The Division should continue to change its image by becoming the mediator between other bureaucracies and the education establishment, particularly the research universities. It should attempt to resolve trivial misunderstandings, remove unreasonable requirements, and suggest measures to cut the costs of meeting federal regulations. Nothing would be more in the spirit of the current Carter Administration. A small step in this direction could be taken in connection with equal employment opportunity programs, for instance. The Division could bring some realism to the colleges' and universities' previously agreed hiring goals in the light of the current slow-down in hiring,

provide a common data base to help institutions cut the costs of their submissions, and take the lead in cutting down the need for multiple submissions to different agencies. These are small steps indeed, but they would be viewed as significant signals by the segment of higher education which the federal government needs as a potential ally.

Conclusion

It will be difficult to re-direct the federal government's programs in higher education, and it will require going against the mainstream. The new proposals may need to be repeated several times before they are accepted. However, they need not fail just because they are different. Federal officials have dared to promote several other innovations in higher education in the past, e.g., aid that is channeled directly to the the students under Basic Educational Opportunity Grants. Such programs were passed by Congress, and are being funded adequately.

Consider the alternatives: Unless work-and-study programs are introduced, it is likely that an important segment of potential students from families with modest means will go to work instead of enrolling in college. Those who believe that this country's progress is best served by a meritocracy will be disturbed by the prospect of less able persons from richer families gaining advancement ahead of abler but less-educated children of the poor. Those concerned with social mobility will be equally disturbed by the prospect that children from economically disadvantaged and minority backgrounds (those most likely to opt for a decent job as soon as it is available) will lose a chance to compete for the best jobs by not enrolling in college.

If handled properly, work and study could contribute to the salvation of higher education as we know it. Full-time students who pay a high price for obtaining a degree cannot be blamed if they choose practical majors which will advance their job prospects. Part-time students who have access to work-and-study programs, and thus sacrifice much less by studying, could be expected to experiment more in their choice of courses. Liberal education would thus attract more work-and-study than full-time students. Without work and study, the number of students will shrink so severely as to introduce cut-throat competition between schools. Simply introducing liberal-arts components into occupational programs, as some academics have suggested recently, is sure to fail. Schools that are desperate for students will undercut any such trend and offer the narrowest programs. Those with the strongest liberal-arts component will lose out in the competition for students. The losses to the intellectual viability of postsecondary education

will be great. Institutions that are accustomed to dealing with full-time students must realize that their salvation lies in accepting the pattern of simultaneous work and study.

Even if the work-and-study programs take off, however, we can, at best, anticipate a stable or somewhat diminished college and education system. Maintaining the intellectual vitality of our research universities, salvaging their ability to innovate, and adding new blood to their staffs will be a separate and monumental task. Our decisions in this area will have both national and international ramifications. It seems inconceivable to dismantle our impressive capacity for training doctoral-level scientists and humanists. It is equally inconceivable to consign nine out of ten of the newly-minted Ph.D.'s to jobs outside of the academic establishment. Public policy will have to play a key role in a difficult balancing act which will reduce the supply of doctoral scientists and humanists, and increase the number of career openings in academia. Our current pattern of employment, which turns over young academicians and lets them loose in the "real world" after six years in academia, is both cruel and dangerous. If it continues, by the end of the millennium we will be short of potential academicians in their forties and our research and teaching capabilities will be severely diminished.

Finally, the maintenance of our research capability is important not only in itself, as it affects the quality of life, but also for its role in our national security. Several Western European nations have already recognized the need to add fresh blood to their academic and research establishments. Their central government budgets are being increased with this need in mind. The effects of these increases have not always been the ones anticipated by the authorities. In France, for instance, instead of drawing new graduates to the research institutes, the new programs have enabled older researchers on part-time or temporary appointments to obtain the lion's share of newly created positions. Great Britain's increased academic budget has just been passed, and it will be interesting to find out what happens there.

In Eastern European countries, by contrast, the prospects for scientific research are much brighter. Although these countries face the same demographic problems we do, they have much more leeway in renewing their research and academic capabilities. Not only are fewer of their high school graduates presently enrolled in higher education, making it easier for enrollments to grow, but the size of their faculties can be increased through administrative fiat. Furthermore, this fiat can be justified quite easily, since their class sizes are now very large and the remuneration of their teachers is relatively low. The recently expressed interest of East European academics in methods of conducting small seminars, instead of traditional large lectures, is a straw in the wind, showing the thinking of their Ministries.

We should not be stampeded into an ineffective, artificial expansion of our postsecondary system because of geopolitical considerations, however. If we draw careful plans to provide worthwhile careers for the more gifted products of our graduate schools, we may yet keep up our leadership in science and the humanities without astronomical outlays. Unfortunately, if we do not establish the minimum level of employment opportunities to meet our goals, we shall waste either resources or people.

It is essential to introduce innovative government policies for education in order to remain where we are. Otherwise we will slide back in social policy, research capability, and quality of life. There can be no better argument for change.

VI

Response I

by **Joseph N. Crowley**

It would be appropriate, perhaps, to begin with a refurbished rendition of the old saw about the two types of people in the world. In this instance, the types would be, first, those who view with alarm and, second, those who view with alarm those who view with alarm. I would for a moment—but only for a moment—categorize myself as type number two in reacting to Joseph Froomkin's essay. That is to say, I am a bit alarmed at the alarmism evident in Mr. Froomkin's claims that the next ten years "will try the souls of those connected with colleges and universities" and that "the 1980's may well become the Dark Ages of higher education . . ." The problems of postsecondary learning in the decade ahead will no doubt be serious ones, but insofar as we can now envision them, they do not seem quite serious enough to conjure up the Dark Ages image. Neither, of course, does the evidence suggest, *à la* Pollyanna, that what looms ahead is a higher education Renaissance (though, with the renewed interest in core curricula, concern about grade inflation, the likelihood of significant growth in adult education and, indeed, with the possible advent of Mr. Froomkin's work and study program, the historians of the future could well perceive the decade of the '80's as a renascent period in the life of higher education)

JOSEPH N. CROWLEY is currently Interim President of the University of Nevada, Reno, where he previously served as Chairman of the Political Science Department. He spent two years in Washington as a Fellow of the National Association of Schools of Public Affairs and Administration and as Director of Institutional Studies for the National Commission on Water Quality. Professor Crowley is the Nevada Associate of the Institute for Educational Leadership, and author of IEL's recent report on the Washington Policy Seminar.

To be fair, Froomkin's essay is clearly not presented as an exercise in alarmism. Soul-trying rhetoric aside, the picture offered of the years to come is one that the author intends should engender concern rather than dread. As with anyone called upon to find a path through the future, Froomkin is forced to keep company with demographers. And, although practitioners of this discipline are essential travel companions of futuristic journeys, one does well to bear in mind their map-reading limitations. It has been said that demography, in terms of its predictive accuracy, has much in common with meteorology. The demographer, however, does not make or break your picnic possibilities for tomorrow; he influences your plans for a decade hence (although when that distant time arrives, sunshine may well take the place of the anticipated thunderstorm).

The demography of the 1980's does give cause for concern, and Froomkin's analysis reflects that concern. His apprehension finds added support in a recent Bureau of Labor Statistics study which reports that, through 1985, 25 per cent of the total number of college graduates will take jobs that have not traditionally attracted these graduates.[1] Such projections, together with relevant birth statistics and the continued bleak outlook for the national economy, sustain Froomkin's argument that now is the time to undertake some rational planning.

The case is well made: The problems will be serious. Demography may be an uncertain science. It may be both the current bosom friend and ultimate mortal enemy of planners. And perhaps, as Howard Bowen suggests, the answer to the question of what level of enrollments is desirable, "is not necessarily that enrollments should merely follow demographic trends."[2] But in the face of what seems to be coming, planning would seem to be in order. The author is convincing on this point, up to a point. After that, his understanding of educational politics takes over and the case for planning suffers.

This is not surprising. If demography is sometimes the long term enemy of planning, politics seems to be almost always an immediate one. Absent a crisis, it borders on the impossible to engage the allegiances of the many players of the Washington educational policy game toward any reasonably encompassing plan to meet the problems of the future. As Froomkin notes, his suggestions are likely to take a number of years to percolate in the capital. By the time the policy pot begins to boil, therefore, we will probably have reached at least the mid-point of the '80's. If the author's demographics hold up, the policymaking system would thus be reacting (as usual) to what has already happened more than planning for what might occur. Recognizing something like this harsh reality, Froomkin recommends a pilot project approach. That approach is a useful one. Politics may look with jaundiced eye

at a full-fledged plan, but it seems willing to wink at a pilot project. One may hope that innovative ideas like those of Mr. Froomkin can find their way into pilot project form before the decade of the 1980's—Dark Age or no—is too much upon us.

The pilot project approach, at least in relation to the Froomkin proposals, may even be more appropriate than a full-fledged plan. The author is quite open about the risks inherent in a work and study concept for higher education. Problems such as possible polarization among different types of schools, financial difficulties for at least some institutions attendant upon a changeover to a substantially part-time student body, the potential temptation to significantly increase the numbers of part-time faculty—those and other problems argue for caution in moving toward the kind of federal postsecondary policy suggested by Froomkin. The probable impact of such a policy on academic research and development—a question raised, again, by Mr. Froomkin—underscores the need for circumspection in moving from concept to implementation. And, certainly, great care needs to be taken in considering the consequences of the work and study idea for private institutions of higher education.

The author is clearly concerned about the future of the private educational sector, and, indeed, is constrained to point out that the problem of equalizing public and private school attendance costs is one of the major contemporary educational issues. His policy proposals, however, do present significant potential difficulties for the private side. As he indicates, institutions in small towns and rural areas "would suffer most from the shift to part-time studies." These institutions are not, of course, exclusively private, but a large number of them are. If the workplace of the work and study program is located in a metropolitan area, as most often it will likely be, the study place will be in the same location. Nonmetropolitan schools would be hard put to compete for students and, as Froomkin observes, could feel the enrollment pinch to a point where their continued existence would be jeopardized. At a time when the plight, or potential plight, of the private schools has become a priority item on the policy agenda, it would seem ill-advised to move expeditiously and comprehensively forward with a policy that might further aggravate the problems of these institutions. Breneman and Finn argue, in their recent book on private higher education, that students ought not be pushed "to enter particular colleges simply because of the vagaries of the ways in which public subsidies are administered."[3] Such a result may obtain if a work and study approach is subsidized without a substantial understanding of its implications. Experimental implementation via pilot projects would facilitate that kind of understanding and perhaps suggest appropriate modification of the program as well.

It is understandable that, in undertaking an examination of the future of higher education, weighty attention must be given to what Froomkin calls "consumption components" and "investment effects." Modern policy analysis is much attuned to the kind of utilitarian statistics which permit analytic field marshals to deploy across the policy battlefield an army of cost benefit battalions and correlationist regiments. This is appropriate because policymaking, in the end, is a very pragmatic enterprise, though problems have been experienced in translating the sometimes esoteric argot of the analysts into the practical language of decisionmakers. Mr. Froomkin has no problem with translation. The consumption components and investment effects, the cost-benefit measurements and the correlations, are described with considerable clarity. The impact of education on jobs, and vice versa, is carefully examined. So are the relationships between education and such consequential concerns as status, marital satisfaction and happiness with life.

It is well that educational policy should rest at least in part on such utilitarian foundations. Employment in particular—a major focus of the Froomkin essay—is a proof of the pudding that policy tasters hunger for. Still, one hopes that other important consequences of higher education do not go unrecognized in any rush, or crawl, to judgment on the policy of the 1980's. For, finally, education must win or lose the game in a democratic society on the basis of its capacity to help produce such more or less tangible products as tolerance; citizenship; an understanding sufficient to appreciate a book, a play, a work of art; and the ability to think logically, to apply scientific method, to exercise the critical faculty. Froomkin observes that "the cultural benefits of postsecondary education" are significant considerations, but that economic costs, especially for children of low-income parents, are a paramount concern. Economic cost factors clearly cannot be gainsaid, but ultimately, whatever the course of policy, there are other costs (and benefits) that must also somehow be fit into the calculus.

These are important, if rather nebulous, matters, but we have here a very concrete set of proposals to deal with. What are we to make of them? The author declares that he was asked to be controversial and innovative. He has fulfilled his charge. His suggestions, however, are not revolutionary. That is not intended as a criticism, although if the Dark Age does indeed descend, revolutionary ideas will be appropriate. There are aspects of Froomkin's work and study program that characterize that program as more an extension of current trends than a departure from current policy. The program is, after all, based on an eclectic model which owes something to the present as well as to the future. The growing emphasis these days on continuing education, on the return of adults to the campus and on taking

more years than four to complete a college degree seems bound to lead eventually toward at least some variant of the policy Froomkin proposes. A recent report by the National Center for Education Statistics offers testimony in this regard. The report estimates, for example, that of the 22 million people enrolled in postsecondary courses in 1975-76, 17 million were in adult education, including 6.3 million part-time enrollees in colleges and universities. Registrations in adult and continuing education noncredit courses swelled by 57 percent between 1967-68 and 1975-76, and the number of 4 year institutions offering these courses increased substantially as well. The report observes also that a bare majority of university and college students in 1974 had no interruption in their schooling.[4]

If these trends continue, Washington decisionmakers will be forced to design some altered form of financial aid policy. Something akin to the proposals advanced by Froomkin seems likely to receive serious consideration.

We live in the age—on the whole a bright age, I believe—of the impact statement. The environmental original has by now generated a host of by-products, which are mainly in the discussion stage but appear destined to take on significant meaning for policymakers. Economic impact statements seem about to be in vogue; social and family impact statements are seen in important quarters as potentially useful policy tools. Others may not be far behind. This development is in many ways a promising one. To be sure, it is not without attendant problems, one of which is conceptual. Impact statements were born out of the ecological perspective, which suggests, to put the matter oversimply, that everything relates to everything else. That is a troublesome idea for policymakers, not to mention its complications for scholarship. But it is an idea that forces attention on the implications of the policy decision, and a concern for implications is unquestionably healthy.

Some of Froomkin's concerns about the educational implications of his policy proposals have already been discussed. There are others that will warrant closer examination: The possible effects on manpower and science policies are two cases in point. Educational policy in the era of impact statements may emerge looking something like the House that Jack Built. And the architects of Jack's House, or at least the consultants on construction, will be the educational lobbies. Froomkin has offered a preliminary and partial design which the lobbies, for the moment, may question. That questioning process is itself an essential ingredient in the development of an educational policy for the 1980's. It makes implications clearer and renders less serious the inevitable problems created by implementation. Whether or not Froomkin's ideas reach the point of implementation, they will very likely help to force some hard thinking about how to cope with current trends and

how to prepare for a future that ought not be left altogether to take care of itself.

The author notes at one point that if the trends and policies of the present continue, we can expect to have "a viable but less exciting system of higher education ten years from now." That is neither an augury of the Dark Ages nor a prospect to warm the soul. Survival, which is viability's bottom line, will not serve well as an educational goal for the coming decade. Joseph Froomkin's essay will help us lift our sights, though we would do well to test the wind a bit before we pull the trigger.

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[1]Bureau of Labor Statistics, *Occupational Outlook for College Graduates*, 1978, as summarized in American Council on Education, *Higher Education and National Affairs* XXVII, Number 29, July 28, 1978, p. 3.

[2]Cited in David W. Breneman and Chester E. Finn, Jr., *Public Policy and Private Higher Education*, Washington, DC, Brookings Institution, 1978, p. 415.

[3]*Ibid.*, p. 417.

[4]Jay Noell, "Postsecondary Education" in National Center for Education Statistics, *The Condition of Education; Statistical Report*, Washington, DC, U.S. GPO, 1978, pp. 100-107.

VII

Response II

by **Michael D. Usdan**

Dr. Froomkin's document merits wide dissemination and consideration among educational policymakers, as well as the general public which has such a profound economic and social stake in the future of higher education. Dr. Froomkin achieves his purposes in writing a "controversial and innovative" piece in a "relatively untechnical manner." He presents in a most readable and informative way a number of the more salient issues which will be confronting higher education in the new and difficult period which lies immediately ahead. Although many of his statements and propositions will be challenged by both economists and educators, they merit discussion and debate. In the limited space available, I am able to comment briefly on only a few of the major issues which are raised in the essay.

Dr. Froomkin quite understandably speaks from the perspective of a long-time professional within the federal bureaucracy. He does not address a number of policy issues which would be of great concern to institutional heads or faculty members who have a campus perspective such as admissions requirements, distribution requirements, and faculty prerogatives and workload. While such issues generally are admittedly beyond the direct purview of federal policy, the point is that Dr. Froomkin speaks from his

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MICHAEL D. USDAN is Commissioner of Higher Education for the State of Connecticut. He was President of the Merrill-Palmer Institute in Detroit from 1974 to 1978 and previously taught at Northwestern and Columbia Universities and at the City University of New York. He also has written extensively on the politics of education and initiated IEL's Associates Program.

perspective at the federal level and legitimately identifies issues that are more likely to concern policymakers in the federal and state arena. My point is not to criticize Dr. Froomkin for quite logically writing from the perspective which he knows best; It is only to caution the general reader that the particular policy issues he identifies are, of course, not exhaustive in scope nor, indeed, are they even the priority concerns that might be articulated by institutional or other segments of the higher education community.

In commenting on some recent books regarding the qualitative effects of education, Dr. Froomkin notes critically that "it is significant that the percentage of [college educated] respondents who felt that life would work out pretty much as they desired, and that things would work out as expected if they planned ahead, declined from 1956 to 1968." Dr. Froomkin implies that this is "significant" because it shows that a college education is no longer viewed as the automatic road to happiness. I would be more inclined to attribute a substantial part of this difference in expectations to the traumatic events of that period, including the assassinations of both Kennedys and Martin Luther King, Jr., the urban riots of the 60's and the unsettling impact of the Vietnam War. These wrenching events surely had a profound impact on the perspectives of young people as to their ability to predict and control their futures and produced widespread uncertainties which contrasted markedly with the more comfortable perspectives of the mid-Eisenhower years. In other words, just as we frequently ascribe too much credit to education, we must be cautious in blaming the higher education enterprise for events and developments over which it has little or no control. Indeed, this illustrates how vigilant we must be in not depending inordinately on the explanatory power of some of the data generated by statistical techniques, however sophisticated, to explain in causal ways complex social, economic, political, and demographic developments. For example, regardless of how precise statistical methodologies and models might be or become, their ability to predict and anticipate the impact upon the birth rate and ultimate college enrollments of developments like World War II, the Pill, and more broadly available abortion remain rather limited. In other words, as Dr. Froomkin acknowledges, "a great deal of subjective development underlies every prediction." Thus, as valuable as statistical analyses may be as interpretive and planning tools, variables will be at work in the larger society over which there is little control, and developments in higher education, as well as in every other policy area, will be determined in part by the somewhat unpredictable social, economic, and political forces at work in society at large.

The reader should bear these caveats in mind when reacting to some of the statistical information and resulting judgments found in Dr. Froomkin's

paper. For example, Dr. Froomkin seems to consider it a criticism of the relevance or quality of higher education that the rate of increase in educational attainment has not remained constant since the 1940's. It seems that this straight line projection analysis is somewhat unfair to higher education. For children born in the 1950's to have shown the same increase over their parents' educational attainment as children born in the 1930's would suggest a rather unrealistic exponential growth curve. Dr. Froomkin notes that had the previous decade's rate of growth continued the median attainment of the current group would have been close to four years of college education by 1975. By the same token, the median would presumably be eight years of postsecondary education by the 1990's. And what about the decade after that? Surely there are some curves that it makes little or no sense to extrapolate.

Despite this quibbling over Dr. Froomkin's interpretations, he certainly pinpoints in cogent fashion many of the major issues facing federal policymakers. He discusses how the political environment in regard to higher education is changing radically. Declining enrollments, decreasing birth rates, and changing conditions in the job market are all factors which will contribute to a marked slackening in the demand for higher education. Institutions of higher education will be compelled to seek new types of students including older and part-time students who often will spend briefer periods of time in attendance at postsecondary educational institutions.

Dr. Froomkin emphasizes the need to reshape federal student aid programs to accommodate these part-time, older, and frequently less affluent students. He also points out how the wages of high school graduates in the 25 to 34 age group increased faster (32%) than the wages of college graduates in the same chronological band (19%) between 1970 and 1975. This information, while certainly documenting a decline in the relative economic advantage of a college education, ignores the absolute advantage as well as the potential non-economic benefits of higher education. Indeed, Dr. Froomkin tends to discount these non-economic factors throughout his paper in downplaying or even ignoring the political and cultural benefits of higher education.

Dr. Froomkin identifies the increasing shift to non-credit offerings in postsecondary education as traditional credentials are viewed by many as being less important. This shift reflects changes in the economy as many high school graduates are opting for programs which provide specific preparation for technical and lower level blue collar jobs. The soaring costs of higher education programs offering degrees and the shrinking economic value of such programs further accelerate this trend. Indeed, as employment

opportunities for college graduates slacken, growing numbers of degree holders likewise are returning to school to be "retooled" and to receive specific job-oriented training. There are parallel trends in degree programs as increasingly job conscious students shift to "practical" majors in growing numbers. The whole shape of higher education must be restructured to accommodate these "non-traditional" students.

Dr. Froomkin cogently discusses how the erosion of teaching positions will decrease dramatically opportunities for college students in the public sector. The "Proposition 13" syndrome in California and the "Baby 13s" which inexorably will follow in other states will also curb or limit any potential growth of government services and further decrease the need for college trained personnel. Growth will be in the private sector with emphasis on the production of goods. Thus, both the economic and political justification and base of support for higher education is eroding and the federal government as well as the entire nation faces critical policy questions. One of the major questions, for example, is whether or not access to higher education should be broadened in the face of a deteriorating market for college trained personnel. The issue is exacerbated, of course, by the recent affirmative action thrust designed to provide greater educational opportunities for minority groups which historically have been denied equality of access to higher education. In other words, can we delimit educational opportunities at the very time in our history when special efforts are finally being made to redress historical inequities for substantial segments of our population? And yet, is it more of a disservice to prepare students for non-existent jobs and inflate expectations that cannot be fulfilled because of changed economic conditions? This is a most perplexing and significant policy question that will confront federal, state, and institutional educational policymakers in the years immediately ahead.

Higher education then, as Dr. Froomkin describes it, is at the "crossroads" and must respond to difficult and altered economic and political realities. Its age of unbridled growth and unquestioned credibility is over and the all-important rather tenuous link between higher education and productivity is under unprecedented scrutiny. As Dr. Froomkin points out, there always will be a substantial proportion of high school graduates who want a college education for status, career, and other reasons. Larger numbers of these students, however, will be searching for more economical ways of securing the necessary credentials because of the decreased monetary rewards to be elicited from higher education. Part-time students, of course, present a new set of problems to those responsible for higher education. Only a small proportion of federal aid, for example, is directed towards part-time students and more creative student aid policies must be formulated

to meet the needs of this growing segment of the postsecondary education community. (Indeed, may I add parenthetically that what may be needed is a national media and print "blitz" that will disabuse both educators and the general public of the still prevailing stereotype of college students as young people between the ages of 17 and 24 who attend classes full time.) The dynamics of the women's movement and attendant changes in life styles and family structures, of course, have also dramatically altered the composition of postsecondary student bodies with more and more females seeking employment and educational opportunities.

Dr. Froomkin points out one positive by product of the current difficult and changing situation in higher education. Despite contracting resources, an economic slowdown, retrenchment and the ravages visited on higher education by inflation, the growing competition for students is generating continuing curriculum innovation. Competition for students between and within campuses is fostering a healthy student consumerism which is compelling greater institutional responsiveness to student needs.

Dr. Froomkin also mentions declining faculty morale as an issue of some consequence. At a time of shrinking resources when drastic economies are needed it is not surprising that college staffs are apprehensive and increasingly concerned about the future. Education is a labor-intensive enterprise and more than three-quarters of most institutional budgets are allocated to faculty salaries and related benefits. It is likewise understandable that faculty unionism will grow in such an uncertain environment with job protection becoming the issue of prime importance.

The sensitive tenure issue, of course, is directly related. With fewer opportunities available to hire new staff, more and more faculty members are "tenured in." There is little or no new blood fed into the system and faculties increasingly will be older and "locked into" existing positions without the vital leavening influence of new colleagues. This dearth of new talent will impact negatively on the quality of both teaching and research and ultimately be quite deleterious to higher education. A dangerous institutional arteriosclerosis can set in when mobility ceases in organizations.

Dr. Froomkin urges policies that will safeguard the "pipeline" of highly trained researchers and academicians and not permit the drying up of new talent. Our nation would suffer greatly in the future if ways are not found to nurture a new generation of needed young scientists and humanists. Indeed, the creation of imaginative new ways of infusing new talent into academe may be one of the most significant challenges confronting educational policymakers at the state and institutional as well as the federal levels. Dr. Froomkin correctly points out the political problems of supporting an intel-

lectual elite in an educational structure that has become so egalitarian in recent years, but this critical issue must be confronted if our "flagship" postsecondary institutions, in particular, are to remain vital and of high quality. We must place the highest priority at the federal, state, and institutional levels on the generation of innovative policies that will make room in postsecondary education for young talent. Somehow, through techniques like providing special incentives for early retirement, changes in tenure laws, and facilitating career shifts, we must ensure chronological diversity in our postsecondary faculties in a no-growth environment. If such policies are to be successfully implemented in the difficult times ahead, faculties and their organizations must be involved in the shaping of such sensitive and potentially volatile personnel policies.

Missing in Dr. Froomkin's analysis, however, is explicit acknowledgment of the need for a state/federal partnership in the formulation of policy in higher education. The diversity inherent in our "non-system" of higher education must be acknowledged. Higher education's constituencies and needs are too diverse for any single level of government to handle unilaterally. Hopefully, new federal initiatives and the possible creation of a new Department of Education will not dampen the freedom of states and individual institutions to be innovative and to respond directly to student and local needs to which the federal government cannot be attuned.

While federal support is necessary and some broad federal policymaking role is certainly appropriate, the governance and financing of postsecondary education remain primarily state and institutional responsibilities. Ideally, joint or coordinated federal-state policies should evolve in areas like student financial assistance. With the formulation of recommendations for reauthorizing the Higher Education Act imminent, federal policy should be predicated upon the assumption that there must be continuous and effective communication with state higher education agencies on matters such as policy development, legislative proposals, recommendations for funding, guideline development and administrative activities. Such cooperation among state and federal policymakers is of much greater importance when an industry is declining or stable than when it is burgeoning. The luxury of uncoordinated decisionmaking can no longer be afforded in higher education.

I will conclude by briefly commenting on the need to increase the number of work-study options in higher education. In a period of "no-growth" or decline, it is vitally important that higher education build stronger ties with the business world or private sector. Education, if it is to sustain both financial and political support, must build more of its programs

around society's manpower needs. Business and education must work more closely together in a symbiotic manner. Such cooperation benefits both, separatism cripples both. Educational programs must become more relevant to the job market; business and industry require a constant flow of trained employees. Both the business and education sectors must create flexible and multiple work-study options. Workers should be given opportunities to return to school if they wish at given times in their careers. Various entitlement policies should be jointly formulated by educational institutions and businesses to facilitate educational opportunities for employees at various stages in their working careers.

VIII

Notes

Page 3

Enrollments: National Center for Education Statistics, *Projections of Education Statistics to 1985–86*, by Martin M. Frankel and Forrest W. Harrison (Washington, D.C.: Government Printing Office, 1977), p. 16.

Educational Attainment: Bureau of the Census, *Statistical Abstract of the United States: 1976* (97th edition) (Washington, D.C.: G.P.O., 1976), p. 123.

Bureau of the Census, *Current Population Reports*, Series P-20, No. 314, "Educational Attainment in the United States: March 1977 and 1976," (Washington, D.C.: G.P.O., 1977), p. 7

Page 3

Aspirations: *National Longitudinal Study*, Data File Users Manual, Vol. II, Center for Educational Research and Evaluation, Research Triangle Park, N.C., April 1978.

Postsecondary exposure: Anne McDougall Young, "Students, Graduates, and Dropouts in the Labor Market, October 1976," *Monthly Labor Review* (July, 1977), pp. 40–43.

Current Population Reports, Series P-20, No. 314, p. 7.

Pages 4–5

Enrollment by income groups: Joseph Froomkin, *Aspirations, Enrollments, and Resources: The Challenge to Higher Education in the Seventies* (Washington, D.C.: GPO, 1970), p. 2.

Page 5

Retention: Bureau of the Census, *U.S. Census of the Population: 1960; United States Summary: Detailed Characteristics*, Final Report PC(1)-1D (Washington, D.C.: G.P.O., 1963), pp. 404, 407.

Bureau of the Census, *Census of the Population: 1970; Subject Reports: Educational Attainment*, Final Report PC(2)-5B (Washington, D.C.: G.P.O., 1973), p. 2.

Statistical Abstract: 1976, p. 124.

A. J. Jaffe and Joseph Froomkin, "Occupational Opportunities for College-Educated Workers, 1950–75," *Monthly Labor Review*, Vol. 101, No. 6 (June 1978) pp. 15ff.

Pages 5–8

Employment patterns of the college-educated: Joseph Froomkin, *Supply and Demand for Persons with Postsecondary Education* (Washington, D.C.: Joseph Froomkin Inc., 1976).

Page 9

Stephen B. Withey, *A Degree and What Else?* (New York: McGraw-Hill, 1971).

Angus Campbell, Phillip Converse, and Willard L. Rodgers, *The Quality of American Life: Perceptions, Evaluations, and Satisfactions* (New York: Russell Sage Foundation, 1976).

Page 11

Howard R. Bowen, *Investment in Learning: The Individual and Social Value of American Higher Education* (San Francisco: Jossey-Bass, Inc., 1977).

Pages 15–16

The economists' estimate of the cost of higher education is (for 1976/77, in billions): tuition, $8; books and travel, $3; subsidies to instruction, $16; lost taxes, $4; and foregone earnings, $34. The educators' estimate includes: tuition, $8; books and travel, $3; subsidies to instruction, $16; living expenses, $18; and research and development funds and receipts for public service activities, $15.

Sources for these estimates are:
Projections of Education Statistics to 1985–86, p. 16.
Joseph Froomkin, *A Review of Financial Developments in Higher Education, 1970/71–1974/75, and a Prognosis for 1980–85*, (Washington, D.C.: Joseph Froomkin Inc., 1977), pp. 59–80.
Bureau of the Census, *Current Population Reports*, Series P-60, No. 105, "Money Income in 1975 of Families and Persons in the United States" (Washington, D.C.: G.P.O., 1977), p. 194.
Bureau of Labor Statistics, *Special Labor Force Report 191*, "Students, Graduates, and Dropouts in the Labor Market, October 1975," by Anne McDougall Young (Washington, D.C.: G.P.O., 1976).
National Center for Education Statistics, *Digest of Education Statistics, 1976 Edition*, by W. Vance Grant and C. George Lind (Washington, D.C.: G.P.O., 1977), p. 132.

Page 16 — Current expenditures in the academic years 1959/60 were $5.4 billion; in 1969/70, $20.3 billion; and in 1974/75, $35.3 billion.
Sources: Froomkin, *Financial Developments*, p. 59.
Projections of Education Statistics to 1985–86, pp. 77–80.
National Center for Education Statistics, *Projections of Educational Statistics to 1979/80*, by Kenneth A. Simon and Marie G. Fullam (Washington, D.C.: G.P.O., 1971), pp. 98–102.

Page 17 — Research and development monies:
Projections of Education Statistics to 1985/86, p. 80.

Pages 17–18 — The effect of the economy on higher education finances:
Froomkin, *Financial Developments*, p. 46.

Pages 19–20 — Faculty: Joseph Froomkin, *Full-Time Faculty in Higher Education—Numbers, Ages and Wages* (Washington, D.C.: Joseph Froomkin Inc., 1977), pp. 10–12, 26.

Page 21 — Change in enrollment rates: Young, p. 43.

Pages 21–24 — Financial aid: *Special Analyses, Budget of the United States Government: Fiscal Year 1979* (Washington, D.C.: G.P.O., 1978), pp. 213–227.
U.S. Office of Education, unpublished analyses.
Joseph Froomkin, *Middle-Income Students and the Cost of Postsecondary Education* (Washington, D.C.: Joseph Froomkin, Inc., 1978), p. 14, 24.

Page 24 — Completion of college: see p. 5.

Pages 24–25 — Independent students: Unpublished data of the 1976 Survey of Income and Education.

Page 25 — Graduate students: *Special Analyses, 1979*, pp. 213–227.

Page 25 — Part-time students: Joseph Froomkin, *Trends in the Sources of Student Support for Postsecondary Education*, ACT Special Report Sixteen (ACT Publications, 1975), p. 33.

Page 28 — Campus-based aid: Anne C. Roark, "Playing the Student-Aid Game," *The Chronicle of Higher Education*, XV, No. 7 (October 17, 1977), pp. 6–7.

Page 32 — Institutions losing enrollments: Froomkin, *Financial Developments*, p. i.

Page 43 — Size of 18-year-old cohort: Bureau of the Census, Current Population Reports, Series P-25, No. 704, "Projections of the Population of the United States: 1977 to 2050" (Washington, D.C.: G.P.O., 1977), pp. 37, 45.

Pages 44–46 — The economists' model: Mark Blaug, "The Empirical Status of Human Capital Theory: A Slightly Jaundiced Survey," *Journal of Economic Literature*, XIV (Sept., 1976), pp. 827–855.

Pages 46–48 — The Swedish model: Mark Blaug and Maureen Woodhall, *Recent Trends in Subsidies to Higher Education in Europe* (Washington, D.C.: Joseph Froomkin Inc., 1977).

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